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ABSTRACTS

FIBERS A

TEXTILE FIBER AND USE SURVEY, 1949-1958. Textile Organon 31: 1-24 (Jan. 1960). (395)

Data are given on 101 end uses of cotton, wool, and manmade fibers by years from 1949 through 1958. The same end uses for the census year 1954 are given for silk, linen, jute, and sisal. Copies of the study are available from the Textile Economics Bureau, Inc., 10 E. 40 St., New York 16, N.Y., at 40¢ each.

Natural fibers A1

EFFECT OF ACETYL GROUPS ON THE STRENGTH OF JUTE FIBER. P. B. Sarkar, A. K. Mazumdar, and S. B. Bandyopadhyay (Indian Central Jute Comm.). (Letter to the editor). Textile Research J. 30: 71 (Jan. 1960). (396)

SORPTION OF WATER BY DRY KERATIN FIBERS IN ATMOSPHERES ABOVE 90% RH. M. Feughelman (CSIRO Wool Research Labs., Australia). J. Appl. Polymer Sci. 2: 189-191 (Sept./Oct. 1959). (397)

Use is made of the basic concepts of a 2-phase model structure for keratin fibers, consisting of a water impenetrable phase embedded in a water penetrable matrix phase. The mechanism of water sorption of a dry fiber in liquid water or in a high humidity atmosphere is discussed. 7 refs.

PLASTICITY OF WOOL. PART 5. ASSESSMENT OF QUALITY IN WOOL. K. J. Whiteley and J. B. Speakman (Leeds Univ.). Textile Research J. 30: 46-50 (Jan. 1960). (398)

Differences of substance among various wools as revealed by plasticity measurements were found to play an important part in determining their suitability for use in manufacturing different types of fabric. It is concluded that quality in wool cannot be assessed by measuring only the dimensional characteristics of the fibers. Tables, 4 refs.

BUYING AND SELLING WOOLS AT A SPECIFIED MOISTURE CONTENT. A. C. Goodings (Ontario Research Found.). Can. Textile J. 77: 49-52 (Jan. 8, 1960). (399)

The moisture absorption capacity of wool, its variability, and the resultant commercial implications are discussed. Facilities established in Australia and New Zealand for testing the moisture content of shipments of scoured and carbonized wools and for certifying the weights of such shipments on the basis of a regain value mutually acceptable to buyer and seller are described.

ACTION OF NITRIC AND HYDROCHLORIC ACIDS ON WOOL WITH PARTICULAR REFERENCE TO SUPERCONTRACTION OF THE FIBERS. W. G. Crewther and L. M. Dowling (CSIRO Wool Research Labs., Australia). Textile Research J. 30: 23-36 (Jan. 1960). (400)

The effects of acid pretreatment on the supercontraction of wool fibers in lithium bromide solution are discussed in terms of chemical and configurational changes in the fibers. Graphs, tables, 30 refs.

COTTONS OF THE WORLD. A. Sattar. Pakistan Cottons 4: 90-114 (Oct. 1959). (401)

Chapter 7. World cotton crops: North America. Chapter 8. World cotton crops: South America. Diagrs, tables.

SOUTHEASTERN COTTON, 1959 CROP. F. L. Gerdes. Textile World 110: 64 (Jan. 1960). (402)

USDA fiber and spinning tests on early-season cotton show that in comparison with last year's crop micronaire value is higher, break factor is better, and nep count is up. Table.

Manmade fibers A2

TECHNOLOGICAL STORY OF DARVAN. L. F. Reuter and R. D. Johnson (B. F. Goodrich Chem. Co.). Can. Textile J. 76: 65-68 (Dec. 11, 1959). (403)

The steps in the development of Darvan nytril fiber are outlined, and fiber, yarn, and fabric properties are described. Graph, tables.

EFFECT OF ENVIRONMENT DURING HEAT TREATMENT ON CHANGES OF MECHANICAL PROPERTIES OF CHEMICAL FIBERS. A. V. Motorina and A. A. Konkin. Tekstil. Prom. No. 6: 52-55 (1959). In Russian. Through BCIRA 39: 4258 (1959). (404)

The mechanical properties of Capron, Anid, and polyester fibers do not change in absence of oxygen at high temperatures. In presence of air the polyamides show the greatest thermal instability.

CURING EROSION AND CORROSION HEADACHES IN VISCOSE SPINNING PUMPS. A. G. Arend. Skinner's Silk & Rayon Record 33: 1181-1182 (Dec. 1959). (405)

The factors responsible for erosion (mechanical wear) and chemical corrosion in viscose spinning are examined, and the application of ultrasonics for pump cleaning is advised.

POLYTETRAFLUOROETHYLENE: A RADIATION-RESISTANT POLYMER. L. A. Wall and R. E. Florin (Nat. Bur. of Standards). (Letter to the editor). J. Appl. Polymer Sci. 2: 251 (Sept./Oct. 1959). (406)

The combination of oxygen and gamma rays leads to a very rapid deterioration of the polymer, while the material is relatively resistant to the radiation alone. 13 refs.

CHEMISTRY AND CLOTHING. H. A. Thomas (Courtaulds Ltd). Research 13: 12-17 (Jan. 1960). (407)

After briefly classifying the different types of fiber, the author describes the production of viscose and the various finishes used to confer different properties. He outlines the merits of regenerated cellulose fibers and describes the advantages of blending viscose rayon staple with other fibers. 11 refs.

WORK OF RUPTURE OF POLYVINYL CHLORIDE FIBERS TREATED WITH HOT WATER. E. Szucht. Przeglad Wlok. No. 4: 164-166 (1959). In Polish. Through BCIRA 39: 4259 (1959). (408)

Movil, Pe-Ce, Fibravyl, and Thermovyl fibers were examined on a Chevenard tester (immersed for 1 min at 20, 40, 60, and 80° C and then stretched to break). Stress-strain curves are shown. All the fibers are resistant to the effect of water at 20° C but differ in their behavior at higher temperatures. The biggest decrease in work of rupture is shown by Thermovyl at 80° C (to about 29% of the initial value). Pe-Ce showed the biggest decrease at 60° C. Movil and Fibravyl behaved similarly, losing about half their strength at 80° C.

MANMADE TEXTILE ENCYCLOPEDIA. J. J. Press, ed. Textile Book Publishers, Inc., 250 Fifth Ave., New York 1, N. Y. 1959. 913 p. $27.50. (409)

Contents: Raw materials; Fiber manufacturing processes; Fiber characteristics; Fiber identification; Staple, tow, and yarn processing; Sewing threads; Rope, cordage, and twine; Woven and industrial textiles; Tufted materials; Knitted textiles; Lace and nets; Nonwoven materials; Textile engineering principles; Dyeing and printing; Flock printing; Finishing; Textile performance standards for specific end-uses; Manufacture of apparel and allied products; Renovation of manmade textiles; Marketing of manmade fibers and fabrics; Economics and statistics: World fiber trade marks; Glossary.

YARN PRODUCTION B

BEHAVIOR OF OLEINS AND MINERAL OILS MIXED WITH EMULSIFIERS IN THE MACKEY APPARATUS. PART 2. M. Kehren and H. Goldstein. Z. ges. Textil-Ind. 61, No. 16: 653-656; No. 19: 782-786 (1959). In German. Through BCIRA 39: 4593 (1959). (410)

The experiments described show that the nature of an emulsifier is of no importance for the results of the official test for mineral oil lubricants, with the exception of cases in which highly refined pure mineral oils are used in the lubricant composition. However, it is advisable to test, alone, and in the intended mixture, oils, emulsifiers, and other admixtures with a tendency to oxidation or catalytic oxidation, with and without iron. A new abbreviated iron test (to ascertain whether a lubricant can be stored in iron containers) is described. (For part 1 see abstr. 2299/59).

THREAD SUCTION INSTALLATIONS ON SPINNING MILL MACHINERY. K. Zitz. Z. ges. Textil-Ind. 61, No. 17: 691-695 (1959). In German. Through BCIRA 39: 4501 (1959). (411)

Various types of thread suction devices are reviewed, with special reference to the Pneumafil and Pneumastop installations (Luwa AG), the Filex dust-removing installation (Gebr. Sulzer AG), and the thread-suction system for cards (Thoma Co.).

BLENDING OF POLYESTER FIBERS WITH COTTON. J. Lünenschloss and M. Frey. Melliand Textilber. 40, No. 8: 842-845; No. 9: 967-971 (1959). In German. Through BCIRA 39: 4507 (1959). (412)

The spinning of blends composed of polyester fiber and cotton in varying ratio is discussed. The spinning plan and the course of the various operations involved are described. The results of evenness tests, the drafting behavior, the efficiency of blending ratio, are discussed with the aid of diagrams. Investigations are carried out on strength elongation and elasticity behavior, and also on the abrasion resistance, flexural strength, knot strength, and shrinkage properties of the yarns. (For Part 1 see abstr. 3702/59).

BLENDED YARNS FROM COTTON AND VISCOSE RAYON. E. Simon. Reyon Zellwolle Chemiefasern 9, No. 9: 588-592 (1959). In German. Through BCIRA 39: 4506 (1959). (413)

Blending ratio, adjustment of staple and fineness, twist in cotton and viscose rayon yarns and their blends, variation of the fiber properties, blends for special purposes spun by the cotton spinning process, and blending before and after carding are discussed, and it is shown that cotton/viscose rayon blends improve (in the medium count range when medium-quality and cheap cottons are used) the properties of yarns and fabrics as compared with pure cotton yarns. Admixture of viscose rayon lowers the price of fine yarns from combed cotton but, at a suitable blending ratio, does not impair the yarn quality. Additions of 30-50% of viscose rayon, according to the desired yarn or fabric character, were found of advantage. The use of special types of viscose rayon fibers with high wet strength (e.g. Duraflox) is recommended.

EXPERIMENTS ON SOME MIXTURES COMPOSED OF THREE TYPES OF FIBERS. L. Rudolph. Rayonne et Fibres Synthet. 15, No. 8: 869-879 (1959). In French. Through BCIRA 39: 4508 (1959). (414)

This article, based on experiments carried out in East Germany, is intended to give the spinner and weaver certain indications on blending yarns from three different fibers, and to show means for improving textiles by using blends combining the characteristic physical and chemical properties of the individual fiber components.

A DURABLE ANTISTATIC FINISH FOR SYNTHETIC FIBERS. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Jan. 1960. 3 p. Bull. X-114. Free. (415)

A new durable antistatic finish, Aston 123, has been developed for pad application to fabrics of Dacron, Orlon, and to blends containing these fibers. Ease of application under practical mill conditions and excellent durability to both laundering and drycleaning are outstanding features of this new finish which is co-applied with a polyepoxide such as Eponite 100.

FIBER BLENDS: THEIR PRODUCTION AND PREPARATION FOR WEAVING. F. Charnley and E. Bradbury. Textile Weekly 60(1): 15-16, 19 (Jan. 1, 1960). (416)

The effects of blend preparation and production on streakiness and color changes and on warp breaks, knot slippage, and fiber loss during weaving are discussed.

PROCESSING ORLON ACRYLIC TOW ON THE TURBO STAPLER AND RELATED EQUIPMENT. E. I. du Pont de Nemours & Co., Textile Fibers Dept., Wilmington, Del. Jan. 1960. 19 p. Bull. OR-101 (replaces Bull. OR-100). Free. (417)

TAILORING FIBERS ON THE TURBO STAPLER. P. H. Coker (J. L. Lohrke Co.). Skinner's Silk & Rayon Record 33: 1162-1165 (Dec. 1959). (418)

The use of the Turbo stapler for heat stretching synthetic fibers to achieve specific properties as well as converting tow to fiber in a single operation is explained. The special effects made possible by the variations induced by heat stretching on denier, tenacity, and elongation are noted. Diagrs, graphs.

Opening, picking, fiber preparation B1

PNEUMATIC CLUTCH IMPROVES PICKER OPERATION. W. A. Latour (So. Reg. Research Lab.). Textile Bull. 86: 66-67 (Jan. 1960). (419)

This air-actuated clutch eliminates the lag in the picker feed system and the column of cotton in the reserve hopper is kept at practically a constant level, as compared with a fluctuation depth of about 12 in. with the conventional belt shifting mechanism. Engineering drawings and technical information on the pneumatic clutch are available without charge from the Southern Regional Research Laboratory, P. O. Box 19687, New Orleans 19, La. Photo, diagr.

Carding and combing B2

PLATT/JOSEPHY CONTINENTAL CARD SET. Platt Bros. Ltd. Platts Bull. 9, No. 9: 307-310 (1959). (420)

Features of the automatic feeder, cards, and tape condenser are noted. Photos.

RIETER HIGH SPEED E7 COTTON COMBER. J. J. Rieter & Co. Ltd. Textile Recorder 77: 71-73 (Jan. 1960). (421)

Novel features include: tension compensator in lap feed mechanism for continuous lap rotation despite intermittent feed; special nipper motion combined with combing cylinders having interchangeable needle segments; and pneumatic weighting of the detaching rollers to give vibrationless running at high speeds. Photos, diagrs.

IS PNEUMATIC CARD STRIPPING POSSIBLE? Rayonne et Fibres Synthet. 15, No. 8: 861-867 (1959). In French. Through BCIRA 39: 4497 (1959). (422)

Difficulties encountered in pneumatic card stripping are discussed. Various available installations are mentioned, and suggestions are made for their improvement.

PLATT GRANULAR CARD. Platt Bros. Ltd. Platts Bull. 9, No. 9: 297-298 (1959). (423)

The features and advantages are briefly noted.

Drawing and roving B3

PLATT MDF5 HIGH SPEED DRAWING FRAME. Platt Bros. Ltd. Platts Bull. 9, No. 9: 273-284 (1959). (424)

Machine details and advantages of the frame are described. Photos.

HIGH SPEED COTTON DRAWFRAME. Platt Bros. Ltd. Textile Recorder 77: 67-68 (Jan. 1960). (425)

Features of the MDF5 drawframe include high speed operation, simple and effective drafting systems, and pneumatic waste removal. Photos, diagr.

HOW TO CONTROL WOOLEN-ROVING VARIATION. W. J. Crofts. Textile World 110: 60-61 (Jan. 1960). (426)

Factors affecting roving uniformity at the card include: method of feeding, moisture content of the stock, feed-table mechanism, dumping assembly, distribution of the stock on the apron, comb setting in relation to spikes, timing of the apron run, and scale pan and balancing edge. Recommended practices for achieving uniformity are outlined.

DRAFTING SYSTEMS AND THE MDF5 DRAWING FRAME. Platt Bros. Ltd. Platts Bull. 9, No. 9: 285-296 (1959). (427)

The limiting factors in sliver regularity, the requirements of a drawframe drafting system, and the development of a system based on 3 lines of bottom rollers to provide complete flexibility for the different requirements of carded and combed fibers, and to permit optimum drafting conditions at all passages of drawing for the full staple range from the shortest cotton up to 2-1/2 in. rayon are discussed. Diagrs, graphs, tables, 3 refs.

Spinning, winding, twisting B4

CONTROL OF THE TWIST DURING MULE SPINNING. J. Schmalz. Reyon Zellwolle Chemiefasern 9, No. 7: 438-446 (1959). In German. Through BCIRA 39: 4500 (1959). (428)

Experiments showed that, in carded wool spinning, the specific twist has an optimum which is a function of the blend quality and the degree of draft on the selfactor. In belt-driven and also in electrical and differential selfactors, the specific twist can be adjusted not only by changing the spindle speed but also by altering the setting of the back-shaft scroll. The draft is in this way considerably increased and a more uniform yarn produced.

PLANETARY DRAFT GEARING FOR SPINNING FRAMES. R. R. Miller and W. H. Tabor (Dixon Corp.). Textile Bull. 86: 52-54 (Jan. 1960). (429)

The design and action of planetary gearing are described, and its advantages over ordinary double compound draft gearing are explained. Photos, diagrs.

ANALYSIS OF THE THREAD BALLOON. J. Zakrzewski. Przeglad Wlok. No. 4: 171-174 (1959). In Polish. Through BCIRA 39: 4168 (1959). (430)

The shape of the thread balloon and the yarn tension in ring, cap, and pot spinning are examined theoretically.

HIGH SPEED SPINNING SPINDLES. J. Textile Machy. Soc. Japan 12, No. 9: 38-49 (1959). In Japanese. Through BCIRA 39: 4165 (1959). (431)

Three papers are presented: On high-speed spindles, by S. Utsumi, p. 38-39; Performance of high-speed spinning spindles, by Y. Iwata, p. 40-43; and Vibration and horse-power consumption of high-speed spinning machines, by M. Nakamura, p. 44-49.

CAUSES OF IRREGULARITIES OF THE PRODUCT IN SPINNING. L. G. Barabanov. Tekstil. Prom. No. 6: 20-26; No. 7: 29-35 (1959). In Russian. Through BCIRA 39: 4172 (1959). (432)

A theoretical treatment is given of the problem of yarn irregularity formation during spinning. The author stresses the need for improved machines, mechanization, and automation of the processes as well as improved quality of raw cotton.

INFLUENCE OF PERIODIC SLIVER WEIGHT VARIATIONS DURING DRAFTING ON YARN PROPERTIES. W. Jablonski and Z. Kozlewski. Przeglad Wlok. No. 4: 14-17 (1959). In Polish. Through BCIRA 39: 4170 (1959). (433)

Yarn of 40s metric count was spun from 30/31 mm Russian cotton, and, during drafting on the different machines, periodic variations were introduced by changing the top roll pressure and by changes of ratch. The irregularity of the yarn was analyzed and is discussed.

DUAL MOTOR DRIVE FOR COTTON RING SPINNING MACHINES. F. W. Cox. Textile Merc. 142: 10-14 (Jan. 1, 1960). (434)

The difficulties involved in controlling spindle rotation in accordance with yarn tension are reviewed, and the advantages of the dual motor drive for handling the problem are described. Photo, diagr, graphs.

DUAL MOTOR DRIVE FOR COTTON RING SPINNING. PART 2. F. W. Cox. Textile Merc. 142: 48-51, 55 (Jan. 8, 1960). (435)

The development of a dual motor drive having the simplicity of a constant speed drive plus the ability to cater automatically and economically to two spinning speeds is described. Photos, diagr, 2 refs.

PLATT MR3 MARK II RING FRAME. Platt Bros. Ltd. Platts Bull. 9, No. 9: 299-302 (1959). (436)

The Mark II has a shortened headstock and a motor mounted on the floor under the spindle rail at the off-end. Improved spinning conditions provide more favorable spinning angles, a lower yarn tension, a reduced end breakage rate, and a better balanced yarn balloon. Single balloon control rings can be applied where high speeds and long lifts are involved. In these conditions, balloon control allows an appreciable increase in the spindle speed to be obtained before balloon collapse occurs. Photos.

PLATT MR4 NARROW RING SPINNING FRAME. Platt Bros. Ltd. Platts Bull. 9, No. 9: 261-272 (1959). (437)

General design and machine details are described. Photos, diagr.

RESEARCH FRAME FOR COTTON RING SPINNING. F. A. Young Mach. Co. Textile Bull. 86: 46 (Jan. 1960). (438)

The frame, built to USDA specifications, is designed to increase the efficiency of tests used to evaluate cotton varieties. It has a 5-roll drafting system with 2 apron sections and spins yarn either direct from sliver or from roving. The frame has 4-1/2 in. gage with 12 spindles per side. Ring size on the unit is 1-1/2 and/or 2 in. Features are enumerated. Photo.

PERFECT RING SPINNING FRAME WITH VARIABLE SPEED DRIVE. A. Müller and G. Schlese. Melliand Textilber 40, No. 9: 959-961 (1959). In German. Through BCIRA 39: 4353 (1959). (439)

The machine (Spinnbau GmbH) is now available with infinitely variable speed drive and can be adapted to suit all operating conditions.

TENSION REDUCER ON THE HOUGET CONTINUOUS SPINNING MACHINE. J. Kinapenne. Rev. Textilis 15, No. 9: 33-40 (1959). In French. Through BCIRA 39: 4499 (1959). (440)

The machine described, equipped with a spinning-tension reducer, solves all the problems which limited up to now the use of continuous spinning machines, and is expected to find application in cotton and carded wool spinning. The main advantage of the system is that the finest yarns can be spun without breakages, very hard bobbins being formed at high speed.

DRAFTING ROLLERS FOR RING SPINNING MACHINES FOR COTTON AND WORSTED SPINNING AND FOR COTTON SPEED FRAMES. German Standards Comm. Melliand Textilber. 40, No. 8: 852-855 (1959). In German. Through BCIRA 39: 4498 (1959). (441)

The German draft specifications DIN 64057, DIN 64058, and DIN 64059 give the dimensions (in mm) of the rollers.

CASABLANCAS DRAFTING AND ITS PROGRESS TO DATE. A. A. Hayes. J. Textile Inst. 50: P740-P753 (Dec. 1959). (442)

In this review of the development of the Casablancas drafting system, the following are described in order to illustrate the main stages of development: original two line, first practical three line, S39, M48, E10B, C10B, C10X, GX, and GX2. Photos, diagrs.

NEW TWISTING PROCESS FOR COTTON YARNS ON DOUBLE-TWIST SPINDLES. M. Michelitsch. Melliand Textilber. 40, No. 8: 839-841 (1959). In German. Through BCIRA 39: 4505 (1959). (443)

A survey of the doubling and twisting systems currently employed in mill practice is followed by a discussion of a new 2-for-1 fine twisting process for cotton yarns. The new process, which has passed its initial trials with outstanding success, operates with a new type of spindle made by Barmer Maschinenfabrik AG.

HOW'S YOUR TWIST? Am. Textile Reptr. 74: 27, 31 (Jan. 14, 1960). (444)

The importance of proper twist in eliminating production problems and improving fabric quality is discussed.

PLATT MD3 RING DOUBLING FRAME. Platt Bros. Ltd. Platts Bull. 9, No. 9: 303-306 (1959). (445)

The narrow MD3 light ring doubling frame is designed for either wet or dry doubling. Its features are outlined. Photos.

MANUFACTURE OF PRECISION YARNS. E. Wienagrotzki. Melliand Textilber. 40, No. 9: 979 (1959). In German. Through BCIRA 39: 4356 (1959). (446)

The description is given of a tube-twister (Maschinenfabrik Menningen KG) for the production of high-precision threads, used for example in the manufacture of zip fasteners.

FRICTION BETWEEN RING AND TRAVELER AND THEIR WEAR. PART 1. EFFECT ON SELFLUBRICATING RING. K. Kanai, H. Kanai, and Y. Kanbara. J. Textile Machy. Soc. Japan 12, No. 9: 14-20 (1959). In Japanese (English summary). Through BCIRA 39: 4167 (1959). (447)

Different designs of rings have been compared for wear and coefficient of friction between ring and traveler by varying the viscosity of lubricating oil.

RING AND TRAVELER IN COTTON SPINNING. W. Franke. Melliand Textilber. 40, No. 8: 846-847 (1959). In German. Through BCIRA 39: 4504 (1959). (448)

The article discusses the correct choice of travelers for highest production and lowest number of thread breakages. Special reference is made to the C-shaped and elliptical travelers (Celliptical, SPIV, Oval) and antiwedge rings.

SELECTION OF NYLON TRAVELERS. R. Struve. Z. ges. Textil-Ind. 61, No. 17: 696-699 (1959). In German. Through BCIRA 39: 4503 (1959). (449)

The advantages and numbering of nylon travelers are discussed, and diagrams are given showing the relationships between the yarn count and the traveler weight for ring diameters of 96, 120, 140, and 180 mm.

Yarns B5

TEXTILE PROBLEMS IN TIRE MANUFACTURE. P. Sichler. Rayonne et Fibres Synthet. 15, No. 8: 915-920 (1959). In French. Through BCIRA 39: 4509 (1959). (450)

The properties required of tire cord yarn are reviewed, with special reference to the increasing use of nylon yarns.

FEATURE OF FIBER ARRANGEMENT RELATED TO VARIATIONS IN COLOR OF COLOR-BLENDED YARNS. P. G. Walker (Shirley Inst.). (Letter to the editor). J. Textile Inst. 50: T701-T702 (Dec. 1959). (451)

TEXTURED FABRICS FROM A NEW BULK YARN. K. Schröder. Reyon Zellwolle Chemiefasern 9, No. 7: 447-450 (1959). In German. Through BCIRA 39: 4530 (1959). (452)

Fabrics with a special surface structure are described, which are made of a yarn (Phrix Werke AG) consisting of a nonshrunk polyamide core covered with any other continuous filament or staple yarn that does not contract or whose contractability is insignificant. The warp of these fabrics may consist of cotton yarn.

RETRACTION OF TWISTED CONTINUOUS FILAMENT YARNS. W. F. Kilby (Courtaulds Ltd). J. Textile Inst. 50: T673-T687 (Dec. 1959). (453)

Experimental evidence is cited to show that commercial methods of twisting favor filament migration, while the twisting of short lengths of yarn by a static method may result in a certain degree of filament compression, which manifests itself in the dependence of retraction on tension and the onset of kinking. It is suggested that, in commercial twisting, some compression may occur, but that this is relieved by migration, while, in the case of static twisting, fiber migration is less likely to take place. Diagrs, graph, tables, 11 refs.

A NOTE ON SPECIFIC VOLUME OF YARN. H. Rahman (Pakistan Inst. of Cotton Research & Technol.). Pakistan Cottons 4: 87-89 (Oct. 1959). (454)

A study was made of the relationship between specific volume of yarn and twist factor. Correlation between specific volume and twist factor was tentatively concluded to be generally poor. Tables.

METHODS OF IMPROVING THE PHYSICO-MECHANICAL PROPERTIES OF COTTON YARN. S. V. Antipin. Tekstil. Prom. No. 7: 75-78 (1959). In Russian. Through BCIRA 39: 4171 (1959). (455)

It is shown that by paying attention to roller weighting on the spinning frame yarn quality can be improved.

FAULTS IN WORSTED YARNS. Textile Recorder 77: 53-55 (Jan. 1960). (456)

An analysis of a 5 year record of worsted yarn faults in a small worsted spinning plant with Bradford type open drawing followed by cap spinning is presented. The individual faults and the steps taken to cure them are discussed. Photos, table.

LYCRA SPANDEX FIBER YARN. E. I. du Pont de Nemours & Co. Man-Made Textiles 36: 40-41 (Dec. 1959). (457)

Lycra elastomeric fiber has physical properties of particular value for foundation garments and other elastic products. Wash and stretch test data, covering recommendations, and bleaching and dyeing information are given. Tables.

RHOVYL MOUSSE: TEXTURED CONTINUOUS FILAMENT POLYVINYL CHLORIDE YARN FOR UNDERWEAR. Hosiery Trade J. 67: 100-101 (Jan. 1960). (458)

The fabric and knitting properties of Rhovyl Mousse, bulked by the Helanca process, are described.

FABRIC PRODUCTION C

ELECTRONIC DETECTION AND AUTOMATIC DETERMINATION OF THICK PLACES IN YARNS. H. G. Vogt. Melliand Textilber. 40, No. 9: 971-975 (1959). In German. Through BCIRA 39: 4363 (1959). (459)

A brief outline of the problems involved in the clearing of yarns is followed by a discussion of the principle, operation, and applications of the Qualitex electronic thread clearer.

EUROPEAN KNITTING DIARY. R. Innes. Hosiery Trade J. 66: 94-96 (Dec. 1959). (460)

Among the developments discussed are: instruments for measuring yarn length during winding of cross-wound cones and yarn package diameter (W. Schlafhorst & Co.); Colorplast machine for hosiery finishing (Eugen Bellmann GmbH); and a direct sectional beaming machine (Karl Mayer). Photos.

Warping, slashing, yarn preparation C1

WARP SIZING. Silk Rayon Inds. India 2: 11-23 (Nov. 1959). (461)

Sizing formulas and techniques for continuous filament and staple warps.

IS AUTOMATION OF WARP YARN WINDING REASONABLE? J. Schneider. Melliand Textilber. 40, No. 9: 984-987 (1959). In German. Through BCIRA 39: 4364 (1959). (462)

Automation must be carried out in a different way from that in other fields if economic success is to be achieved. Practical data are presented, and a new line of development is pointed out.

UNWINDING SYSTEMS OF WARP WINDING MACHINES IN COTTON WEAVING. PARTS 1 AND 2. H. Eigenbertz. Melliand Textilber. 40, No. 8: 856-858; No. 9: 980-983 (1959). In German. Through BCIRA 39: 4524 (1959). (463)

The historical development and importance of unwinding systems for the economical operation of warping and beaming machines, and the application and advantages of the Schlafhorst unwinding accelerator are discussed.

EXAMINATION OF THE RUNNING PROPERTIES OF WARP YARNS. W. Schmitz. Reyon Zellwolle Chemiefasern 9, No. 9: 596-602 (1959). In German. Through BCIRA 39: 4526 (1959). (464)

Results from experiments, carried out on winding and warping machines for carded wool and worsted yarns, are discussed and tabulated. Special reference is made to the optimum width of the slot clearer.

PREPARATORY MACHINES FOR THE MANMADE FIBER INDUSTRY. J. Schneider. Rayonne et Fibres Synthet. 15, No. 8: 920-925 (1959). In French. Through BCIRA 39: 4522 (1959). (465)

The Hacoba automatic pirn winders with four and one spindle, respectively, the Schlafhorst Autocopser ASE, and the Abbot radial weft winder are described and illustrated.

SOME CAUSES OF BREAKAGES OF YARN DURING WINDING. E. A. Onikov. Tekstil. Prom. No. 7: 52-54 (1959). In Russian. Through BCIRA 39: 4189 (1959). (466)

MILL SURVEY OF WARP TYING. Textile World 110: 56-57 (Jan. 1960). (467)

A 9-mill survey shows a definite trend to replace stationary tying-in machines with portable machines that tie a complete warp in only one hand. The successful application of the tying-in machines depends on the warp-preparation methods used.

WARPING MACHINE DRIVES. J. Schneider. Z. ges. Textil-Ind. 61, No. 17: 701-706 (1959). In German. Through BCIRA 39: 4525 (1959). (468)

A comparison is made of various warping machine drives, with special reference to their development.

SOFTENERS AND OILS IN SIZING AND SLASHING. Textile Mfr. 85: 485-488 (Nov. 1959). (469)

Some of the problems arising from the use of softeners and oils in warp sizing are pointed out, and suggestions for their correction are made. 10 refs.

SIZING AND SIZING AGENTS. G. Rordorf. Z. ges. Textil-Ind. 61, No. 17: 707-715 (1959). In German. Through BCIRA 39: 4527 (1959). (470)

The sizing process is discussed both from the technological and chemical standpoint, and a survey is made of the available sizing agents. Special sizes and sizing assistants are listed.

STARCH JET COOKING SYSTEM. A. E. Staley Mfg. Co. Am. Textile Reptr. 74: 49, 52 (Jan. 14, 1960). (471)

The Staley high-solids jet cooking system overcomes the inadequacies of other cookers in preparing uniformly, by batch methods, formulations containing as much as 3 lb of starch per gallon as well as fillers such as talc or clay. The operational steps are described. Diagr.

ANSWER TO SOME SIZING PROBLEMS. E. G. King and G. Wood (Corn Prods. Sales Co.). Textile Inds. 124: 83-85 (Jan. 1960). (472)

The improved gelatinization temperatures, setback, and transparency of a new series of oxidized starches are compared with those of previous products. Graphs, 2 refs.

Weaving C2

AUTOMATIC CONTROL OF THE POSITIVE WARP LETOFF MECHANISM OF A POWER LOOM. H. Kamogawa. J. Textile Machy. Soc. Japan 12, No. 9: 21-27 (1959). In Japanese (English summary). Through BCIRA 39: 4193 (1959). (473)

When the number of oscillations of the warp is more than 40-150 cycles/min the automatic control mechanism has no effect, but the warp tension irregularity decreases to one-tenth when the oscillations are within 5 to 7 cycles/min and to one-ten thousandth when they are 0.1 cycles/min.

GAGES IN DRAPER LOOM MAINTENANCE. PART 1. Textile Inds. 124: 69-73 (Jan. 1960). (474)

This series of articles is intended as a companion to the previous series on "Draper Loom Fixing" which appeared several years ago in Textile Industries. The first article discusses the use of gages in lay alignment. Photos.

SIGNIFICANCE OF THE RESILIENT BRACING OF THE REED. M. I. Petrov. Tekstil. Prom. No. 7: 49-51 (1959). In Russian. Through BCIRA 39: 4194 (1959). (475)

Data are given to show the advantages of resiliently braced reeds over rigid ones, e.g. in reduction of end breaks and avoidance of weft bars and warp stripes.

DEVICE FOR THE SYNCHRONIZATION OF LOOM MOTIONS. J. Plewinski. Przeglad Wlok. No. 4: 186-187 (1959). In Polish. Through BCIRA 39: 4192 (1959). (476)

The device, designed at the Textile Institute, Lodz, has a level indicator to mark the change in angular position of the main shaft. It can also be fixed to any accessible shaft element revolving in a plane perpendicular to the shaft axis.

PRACTICAL APPLICATION OF THE MAXBO AIR-JET LOOM. K. Greenwood (Brit. Rayon Research Assoc.). Textile Recorder 77: 56-57 (Jan. 1960). (477)

Production information on a Swedish installation of Maxbo looms is provided, and the scope of the loom in commercial operation is evaluated. Photos.

LOOMFIXER AND HIS JOB. PART 14. W. Westbrook. Textile Bull. 86: 51 (Jan. 1960). (478)

Steps in refinishing and covering shuttle boxes are outlined. Diagr.

LOW BUILT ASTRA HIGH SPEED LOOM MODEL AMN. W. Rossborg. Melliand Textilber. 40, No. 9: 987-990 (1959). In German. Through BCIRA 39: 4366 (1959). (479)

The loom is described. The standard model is equipped with a drop box shuttle-changing motion operating with 2/4 boxes and a single-lift, closed-shed, reverse motion dobby.

IS THE AUTOMATION OF EXISTING LOOMS NECESSARY? H. Sannig. Melliand Textilber. 40, No. 9: 995-999 (1959). In German. Through BCIRA 39: 4369 (1959). (480)

The conversion of existing looms to automatic systems is always profitable, provided the most suitable type of automatic motion is selected in each particular case. Valentin and Varitex automatic attachments are described and discussed.

SUGGESTIONS FOR STANDARDIZATION IN THE TERMINOLOGY OF WEAVES. G. Krämer. Melliand Textilber. 40, No. 9: 1011-1016 (1959). In German. Through BCIRA 39: 4375 (1959). (481)

The suggestions made deal mainly with the representation of fabric cross-sections and weave diagrams.

ELECTRIC VERDOL DACTYLO-READING-, COPYING-, AND PUNCHING MACHINE. Soc. des Mécaniques Verdol. Melliand Textilber. 40, No. 9: 1007-1011 (1959). In German. Through BCIRA 39: 4371 (1959). (482)

The operation of an electric copying and punching machine for a jacquard, and the method of punching the cards, are discussed.

EFFECT OF AUTOMATION IN THE TEXTILE INDUSTRY WITH SPECIAL REFERENCE TO THE CONDITIONS IN THE WEAVING SECTION. F. Forrer. Melliand Textilber. 40, No. 8: 866-870 (1959). In German. Through BCIRA 39: 4529 (1959). (483)

General remarks on the effect of automation in textile mills are followed by a discussion of new machines designed with this development in view, and an outline of the future trends in the design and construction of weaving machinery.

MODERN PICKER DEVELOPMENTS. Man-Made Textiles 36: 48-49, 52 (Dec. 1959). (484)

The merits and faults of super high density polythene pickers as observed in practice in three mills are described. Photos.

WARP CONTROL IN WEAVING WITH HEDDLE STAGGERING MOTION. Staubli & Co. Textile Weekly 60(1): 82-83 (Jan. 8, 1960). (485)

The Staubli heddle staggering motion has been designed to eliminate the defects occurring with dobby shedding applications and to give each heddle its own individual accelerated, normal, or retarded motion in accordance with fabric structure and drawing in. Diagrs.

SHUTTLE PROBLEMS AND SHUTTLE MAINTENANCE. A. Martz. Melliand Textilber. 40, No. 9: 1000-1004 (1959). In German. Through BCIRA 39: 4372 (1959). (486)

The article describes the manufacture, care, and maintenance of weaving shuttles.

AUTOMATIC CHANGE-THREADS CUTTING MACHINE. Melliand Textilber. 40, No. 9: 1006-1007 (1959). In German. Through BCIRA 39: 4374 (1959). (487)

The Vollenweider Imperial is a new high-speed machine for cutting loose ends and loops of weft threads from the selvages of check fabrics. The cutting unit runs automatically along the selvage, and the machine is provided with an infinitely variable gear for running the goods at speeds from 0 to 100 in/min.

TAIRO COTTON HEDDLE TESTING MACHINE. Textile & Allied Inds. Research Org. India. Textile Dig. 20: 109-113 (July-Sept. 1959). (488)

An Indian wear tester for testing the wearing quality of the heddle at its eye. Some testing results are given. Photo, tables.

PLANNING AND WEAVING TERRY BEDSPREADS. T. Hargreaves. Textile Mfr. 85: 489-490 (Nov. 1959). (489)

Factors to be considered in selecting design, jacquard type, and loom in manufacturing one-face figured terry fabrics for bedspread use.

USE OF RADIOACTIVE ISOTOPES IN WEAVING. P. V. Vlasov. Tekstil. Prom. No. 7: 45-49 (1959). In Russian. Through BCIRA 39: 4195 (1959). (490)

The effect of positive and negative warp regulators on cloth structure was examined on the loom by means of a method involving the use of a radioactive isotope. The principle that the intensity of radiation passing through a fabric varies with the fabric structure was applied.

Knitting C3

IMPROVED DURABILITY OF STOCKINGS MADE FROM MERCERIZED COTTON YARN. E. T. Ustinova and L. I. Zvereva. Tekstil. Prom. No. 6: 42-43 (1959). In Russian. Through BCIRA 39: 4234 (1959). (491)

NEW TRENDS IN STOCKING MANUFACTURE. D. W. Smith (Brit. Nylon Spinners Ltd). Hosiery Trade J. 67: 87-88 (Jan. 1960). (492)

Among the recent innovations mentioned are: Smithknit device for heat treating unprocessed yarns for seamless hose welts; end cutters for seamless hose; automatic control of leg lengths; A. M. S. L. linking attachment for bulky seam; and dyeboarding machine.

A YEAR'S MILL EXPERIENCE WITH THE CK-A CIRCULAR HOSIERY MACHINES. W. Shewmake. Textile Inds. 124: 117-118 (Jan. 1960). (493)

THERMAL UNDERWEAR. J. Rab. Hosiery Trade J. 66: 73-75 (Dec. 1959). (494)

Weft knit thermal fabric constructions produced on cylinder and dial machines as claimed in USP 2 839 909 and 2 702 463 are described. Diagr.

SCOPE OF MULTI-STEP SELECTING MECHANISMS. J. B. Lancashire. Hosiery Trade J. 67: 110-113 (Jan. 1960). (495)

Geometric and freehand patterning possibilities with the use of multiple butt jacks being placed below the needles in the cylinder tricks are reviewed. Photos.

ALUMINUM DEVICE HOLDS DOWN YARN DURING FASHIONING. Knitted Outerwear Times 28: 21 (Jan. 11, 1960). (496)

An attachment consisting of a one-inch square of aluminum is employed to keep yarn down in the throat of the sinkers of a 9-gage full-fashioned machine during the fashioning process. Photos.

PATTERN SCOPE OF WARP KNITTING EQUIPMENT. PART 13. A. Reisfeld. Knitted Outerwear Times 28: 7, 11, 15, 16 (Jan. 11, 1960). (497)

The application of the yarn itself as means for creating novel designs. Plating effects are discussed. Diagrs.

PATTERN SCOPE OF WARP KNITTING EQUIPMENT. PART 13A. A. Reisfeld (Gehring Textiles Inc.). Knitted Outerwear Times 28: 82-83 (Jan. 25, 1960). (498)

Further aspects of plating are considered by discussing an elementary 2-bar construction.

PRODUCTION CONTROL IN KNITTED OUTERWEAR MILLS. T. A. Podbereski. Knitted Outerwear Times 28: 15, 28-29 (Feb. 1, 1960). (499)

Good layout, yarn inventory forms, yarn issue methods, and a yarn control board are discussed.

NEW AUTOMATIC FEATURES FOR THE BENTLEY-COTTON MODEL UO/AE. Hosiery Trade J. 66: 98-99 (Dec. 1959). (500)

A substantial saving of time in the knitting of fully-fashioned garment parts on the Bentley-Cotton UO/AE machine has been effected by providing for the substitution of automatic controls for all the operations hitherto carried out manually. The machine is also equipped with a panel for changing from automatic to manual control or vice versa as circumstances require. The alterations are described. Photos.

STOLL UFD FULLY AUTOMATIC DOUBLE SYSTEM V-TYPE FLAT KNITTING MACHINE. H. Stoll & Co. Hosiery Trade J. 67: 98-99 (Jan. 1960). (501)

Features and operation are described. Photos.

LIBA-TEXTOR JACQUARD-RASCHEL LACE MACHINE. Man-Made Textiles 36: 42 (Dec. 1959). (502)

Features and applications are briefly described.

Fabrics C4

ALL ABOUT CARPETS. Good Housekeeping: 52-65 (Feb. 1960). (503)

Consumer standards for wise carpet buying are discussed in this Good Housekeeping carpet survey. The various carpet fibers are evaluated for properties of abrasion resistance, crush resistance, soil resistance, and ease of care. Comments and price information on each fiber are also presented. Style, color, and suitability are illustrated in colored photos of appropriate carpet selections for a variety of rooms.

MANUFACTURE AND PERFORMANCE CHARACTERISTICS OF ACRILAN CARPET. Chemstrand Corp. Can. Textile J. 76: 69-70 (Dec. 11, 1959). (504)

CHEMISTRY AND APPLICATION OF RUG-BACKING COMPOUNDS. PART 1. G. Brawner. Textile World 110: 79, 82, 85 (Jan. 1960). (505)

The properties, advantages, and disadvantages of natural, prevulcanized natural, neoprene, GRS (butadiene-styrene), nitrile, styrene, and polyvinyl chloride latices are summarized.

CARPETS: THE GROWING TEXTILE. A. Crossland. Textile Recorder 77: 60-62 (Jan. 1960). (506)

A general review of the carpet industry and carpet production methods. Photo, diagr.

WHAT'S NEW IN HOME FURNISHING FABRICS. Modern Textiles Mag. 41: 26-36, 44 (Jan. 1960). (507)

Report on new fabrics seen at Home Furnishings Market in Chicago.

OBSERVATIONS ON CARPETS MADE FROM VISCOSE RAYON STAPLE FIBER. W. Bandel. Melliand Textilber. 40, No. 8: 875-882 (1959). In German. Through BCIRA 39: 4533 (1959). (508)

The article discusses the spinning processes and comparative wear properties of carpets made from viscose cuticular and coagulation fibers and wool. Floxan carpets have shown a superior wearability and reduced soiling in contrast to carpets made from highly crimped fibers. The latest developments in the field of carpets composed of Splinter yarns (skin and core yarns), and blends of these yarns with Perlon etc., are pointed out, and the results of comparative dyeability and inflammability tests carried out on spun rayon carpets are described. 39 refs.

WOVEN CARPET. PARTS 6, 7, AND 8. H. Osswald. Melliand Textilber. 40, No. 8: 862-866; No. 9: 990-995; No. 10: 1157-1160 (1959). In German. Through BCIRA 39. 4532 (1959). (509)

The articles 6 and 7 discuss the production of carpets on single-shuttle, double-shuttle, and pile wire looms. Article 8 deals with the techniques used on shuttleless looms, the weaves employed for various types of pile, and the mechanical equipment required.

INDUSTRIAL FABRICS. T. V. Young (John Bright & Bros. Ltd). Textile Weekly 60(1): 20-27 (Jan. 1, 1960). (510)

The construction of industrial fabrics for rubber footwear, tires, filters, hoses, V-belts, tentage, and conveyor belting is reviewed.

EXPOSURE TRIALS OF COATED NYLON FABRICS. Brit. Nylon Spinners Ltd, Textile Development Dept., Pontypool, Monmouthshire, England. Dec. 1959. 5 p. Advance report no. 23. (511)

In order to gage the effects of direct sunlight and natural weathering, some coated nylon fabrics of current commercial manufacture were exposed outdoors at different times of year for different periods, all of which yielded 200 hours of direct sunlight. Tests for tensile and tear strengths were made before and after exposure. Natural fiber tarpaulins and coated Terylene fabrics were tested in the same way and the results compared. Results showed that coated nylon is well suited for prolonged outdoor use. Tables.

NONWOVEN FABRICS FOR DAILY AND TECHNICAL USE. V. N. Nebarov and E. T. Ustinova. Tekstil. Prom. No. 5: 73-77 (1959). In Russian. Through BCIRA 39: 4198 (1959). (512)

A description is given of a Russian machine for production of bonded fiber fabrics. The properties of typical nonwoven fabrics (e.g. filter fabrics and pile fabrics) are presented, and formulations for binders are given.

RESNIT REINFORCED PLASTIC. Fibres and Plastics 20: 379-380 (Dec. 1959). (513)

Resnit in its standard form is a resin-impregnated knitted fabric, the structure of which is so designed as to permit the required degree of extensibility during forming so that it can readily be molded to the desired shape without any tailoring or other preliminary operations. Manufacture, properties, and cost are briefly described.

COTTON IN NONWOVEN FABRICS. C. W. Russell. Nat. Cotton Coun., Utilization Research Div., P. O. Box 9905, Memphis 12, Tenn. Nov. 1959. 21 p. Free. (514)

A study of current production and consumption trends in nonwoven fabrics, as well as of market potentials and impact on demand for conventional textile fabrics. 20 refs.

GLASS FIBERS IN REINFORCED PLASTICS. Fibres and Plastics 20: 363-365 (Dec. 1959). (515)

The properties required in glass fibers for use in reinforced plastics, the construction of the glass fabrics used, and the mechanical, physical, and thermal properties of glass fiber/polyester laminates are reviewed. Photos, diagr, tables.

RESINS FOR GLASS REINFORCED PLASTICS. Fibres and Plastics 20: 371-375 (Dec. 1959). (516)

Polyester and polyepoxide resin systems for glass reinforced plastics are discussed. 18 refs.

PRODUCTION OF REINFORCED PLASTICS. Flexo Plywood Inds. Ltd. Fibres and Plastics 20: 375-376, 380 (Dec. 1959). (517)

Applications of glass fiber reinforced laminates in the electrical industry, building and construction, coachbuilding, chemical plant and equipment, and safety equipment are summarized.

SPRAYING PROCESS FOR GLASS FIBER REINFORCED SYNTHETIC RESINS. Aust & Schüttler Co. Fibres and Plastics 20: 366-367 (Dec. 1959). (518)

The difficulties and disadvantages of the usual techniques for producing glass fiber reinforced laminates (preform, pressing, and hand lay-up) are overcome by the use of the MAS spraying process. A spraying machine enables cut glass fibers and resin to be evenly and simultaneously sprayed in any desired proportion, either on or into molds and forms, or on any other type of surface. Photos.

TUFTED TEXTILE TRADE INDEX, 1959. Skinner's Silk & Rayon Record 33: 1215-1224 (Dec. 1959). (519)

Alphabetical listing of British manufacturers of tufted textiles, tufting machinery, ancillary equipment, chemicals and backing compounds, dyes, backing cloths, and fibers, as well as yarn spinners for tufted textiles, dyers, and printers.

DESIGNING OF PILE FABRICS. CHAPTER 2. E. B. Berry (N. C. State Coll.). Textile Bull. 86: 44-45 (Jan. 1960). (520)

Long chain quillers for measuring filling yarn and scouring and coating machines used in pile fabric production are described. Diagrs.

FIBERGLASS ACOUSTICAL INSULATION FOR THE AIRCRAFT INDUSTRY. Fibreglass Ltd. Fibres and Plastics 20: 378 (Dec. 1959). (521)

The construction and properties of insulation panels made from superfine type 2A glass fibers are briefly described. Graph.

TRENDS IN AUTOMOTIVE FABRICS. W. E. Belanger (Chrysler Corp.). Modern Textiles Mag. 41: 45-48 (Jan. 1960). (522)

The steps in selecting automotive fabrics and the characteristics desired in such fabrics are outlined.

SYMPOSIUM ON NONWOVEN FABRICS. PART 1. AREAS FOR NONWOVEN FABRICS ADVANCEMENT. P. A. Homier (Callaway Mills Co.). Am. Dyestuff Reptr. 49: 40-41 (Jan. 11, 1960). (523)

The areas in which further improvements would be beneficial include binders, fibers, and finishing.

SYMPOSIUM ON NONWOVEN FABRICS. PART 2. PROPERTIES OF ACRILAN NONWOVEN FABRICS AS A FUNCTION OF FIBER LENGTH, DENIER, AND BINDER CONTENT. D. C. Nicely (Chemstrand Corp.). Am. Dyestuff Reptr. 49: 41-43 (Jan. 11, 1960). (524)

WOVEN FABRIC STRUCTURE: FANCY DIAMOND PATTERNS. D. C. Snowden. Man-Made Textiles 36: 55-57 (Dec. 1959). (525)

DESIGN IN WOVEN STRUCTURE. PART 90. COLOR-AND-WEAVE EFFECTS. D. C. Snowden. Wool Rev. 33: 41-42 (Dec. 1959). (526)

ROT RESISTANCE AND WATER RETAINING ABILITY (SWELLING VALUE) IN NATURAL FIBER YARNS FOR FIRE EXTINGUISHING HOSE. B. R. Hinricks. Melliand Textilber. 40, No. 8: 919-920 (1959). In German. Through BCIRA 39: 4592 (1959). (527)

Soil-burial tests on yarns used for weaving fire hose have shown that silver flax is far superior to ramie, flax, and hemp. A direct connection between the water retaining ability and the loss of strength caused by the attack of microorganisms could not be exactly determined.

MASS TRANSFER COOLING OF PARACHUTE MATERIALS. R. H. Cornish and others (Cornell Univ.). Wright Air Development Center, Wright-Patterson Air Force Base, Ohio. Sept. 1959. 87 p. WADC tech. report 58-684. (528)

Seventy-three tests were made on different parachute ribbon materials and protective coatings. These tests were conducted at Mach 5, pressure altitude of 100,000 feet, and stagnation temperatures of 700 to 900° F. Most of the effort was devoted to mass transfer cooling (sublimation and melting). Hexachloroethane, Chloroanthraquinone, Methyl-anthraquinone, Hydroxyanthraquinone, and Camphene were applied by various techniques in several thicknesses. The results of these tests are plotted in the form of: lifetimes parameterized in terms of coating weight, temperature profiles, and heating rates. Tabular data is presented for all of the runs. This data indicates that coating weights on the order of the weight of the ribbons are required to give significant protection at the test conditions and that mechanical protection must be provided to the coatings to improve their efficiency.

WASH-AND-WEAR FABRIC FROM POLYESTER/COTTON BLENDED YARN. F. Nestelberger. Textil-Rundschau 14, No. 8: 436-437 (1959). In German. Through BCIRA 39: 4378 (1959). (529)

LATICES IN THE TEXTILE INDUSTRY. L. L. Shailer (B. F. Goodrich Chem. Co.). Can. Textile J. 77: 45-48 (Jan. 8, 1960). (530)

The types of latices most commonly used in the textile industry include SBR (styrene-butadiene rubber), natural rubber, polyvinyl chloride, nitrile, polyvinyl acetate, and acrylic. Their uses in nonwoven fabrics, and for dimensional stabilization, back-coatings, decorative and functional finishes, pigment binding, wear resistance, heat sealing, crock reduction, hand and drape variation, and in the laminating or bonding of fabrics are described.

RESISTANCE TO ABRASION AND CLOTH STRUCTURE. B. S. V. Rao. Indian Textile J. 70: 89-94 (Nov. 1959). (531)

Data are presented on the resistance to abrasion of fabrics woven with 2/20s warp and 10s weft. Picks per inch were varied for plain, 2/2 twill, 2/2 broken twill, and 2/2 matt weaves. Martindale's abrasion tester was used. Diagrs, tables, 11 refs.

WRINKLE RECOVERY EVALUATION. E. J. Rock, S. E. C. Hansen, and B. S. Kalka. J. Home Econ. 52: 103-106 (Feb. 1960). (532)

This study investigated two methods for measuring wrinkling. The first was a subjective appearance measurement and the second an objective reflectance measurement. The following conclusions were drawn: (1) Color affected the evaluation of wrinkles. (2) The light reflectance of a fabric was always lower after wrinkling and increased again when the fabric was allowed to recover from wrinkling. (3) The comparison of the results of the vertical strip method, wrinkle characterization rankings, and reflectance difference method showed them to be similar in many cases. (4) There was no consistency of a higher or lower wrinkle ratio with a higher or lower recovery ratio in the results recorded. Tables, 5 refs.

FOAM FILTER: NEW AIR CLEANER FOR TEXTILE INDUSTRY. S. Frankiewicz and S. Kedzia. Przeglad Wlok. No. 4: 207-209 (1959). In Polish. Through BCIRA 39: 4273 (1959). (533)

The construction and operation of the new filter (developed in Poland) are described. Tests show it to be better for removing fiber dust than the sack filters and cyclones in common use.

TRADE MARKS AND LABELING OF TEXTILE PRODUCTS. Associazione Cotoniera Italiana. Intern. Rev. Cotton Allied Textile Inds. 27: 366-375 (Dec. 1959). (534)

A report on labeling (fiber content and quality) progress and problems with a survey of regulations in the U.S., Germany, France, the United Kingdom, Belgium, Japan, and Italy. "Care" and "use" labeling are also discussed.

TEXTILE CHARACTERISTICS: CONSUMERS' WISHES AND SUGGESTIONS. A. Lisson. Melliand Textilber. 40, No. 7: 760-762; No. 9: 1073-1075 (1959). In German. Through BCIRA 39: 4586 (1959). (535)

The article discusses labels used in Denmark, Holland, and Germany to indicate directions for washing, bleaching, ironing, and drycleaning of textile goods. The signs and symbols used are indicated.

MANUFACTURE OF BLANKETS OF ACRILAN ACRYLIC FIBER. Chemstrand Corp., Decatur, Ala. Dec. 1959. 10 p. Bull. AP 15. (536)

FINISHING D

TEXTILE FINISHING MACHINERY: NOMINAL WIDTH, ROLLERS, RODS, SHELLS. German Standards Comm. Melliand Textilber. 40, No. 9: 1085-1089 (1959). In German. Through BCIRA 39: 4404 (1959). (537)

Standards DIN 64901-5 are presented.

VINYL PROCESSING MACHINERY: DECADE OF CONTINUAL PROGRESS. B. Quarmby. Fibres and Plastics 20: 377-378 (Dec. 1959). (538)

The design and operation of the Lembo laminator-embosser is described.

SYMPOSIUM ON NONWOVEN FABRICS. PART 3. STYLING AND DECORATING ACETATE NONWOVENS. E. L. Clements, H. W. Coates, and C. E. Layman (Celanese Fibers Co.). Am. Dyestuff Reptr. 49: 44-46 (Jan. 11, 1960). (539)

Five topics are discussed: solvent dyeing, acetate silk screening and machine printing, plasticizers-dye-acetate fiber combinations, acetate molded fiber forms, and technique for securing 3-dimensional effects.

PROGRESS IN DYEING AND FINISHING. B. C. M. Dorset. Textile Mfr. 85: 513-517 (Nov. 1959). (540)

Developments discussed include: staining test for differentiation of skin and core of viscose and mercerized and unmercerized cotton; noncaking antistatic agents (BP 817 355); level wool dyeing with milling dyes (BP 812 852); high luster and seersucker effects on wool; 1:4-dioxane as dyeing assistant for polyester fibers (BP 815 738); factors causing creasing during wear and laundering; and fast oxazine dyes for acrylic fibers.

FINISHING OF RAYON LINING MATERIALS. K.-H. Stukenbrock. Reyon Zellwolle Chemiefasern 9, No. 7: 452-459 (1959). In German. Through BCIRA 39: 4552 (1959). (541)

Directions are given for the desizing, dyeing (pad-jig and pad-roll methods), drying, and finishing of lining materials (for sleeve linings, hat linings, etc.).

Chemical processes

TABLE OF TEXTILE ASSISTANTS. St. Jost. Te Rundschau 14, No. 6: 329-335; No. 7: 388-39. 8: 448-460 (1959). In German. Through BCIRA 4390 (1959). (542)

Textile assistants (mainly British, German, and American) are listed alphabetically in groups according to their use: sizing, desizing, lubricating, wetting, washing, and drycleaning, bleaching, brightening, stripping, leveling, (dye) fixing, printing, sequestering, softening, finishing, crease resisting, flameproofing, waterproofing, antistatic treatment, delustering, etc. (For previous part see abstr. 3725/58).

TEXYLON FINISH. Texylon Ltd. Textile Merc. 142: 46 (Jan. 8, 1960). (543)

Texylon is a complex silicone compound in liquid form which can be emulsified with water for application. Its uses for improving abrasion resistance, reducing soiling, and controlling pilling are discussed.

BULK HANDLING OF STARCH. E. Weiland (A. E. Staley Mfg. Co.). Am. Textile Reptr. 73: 14, 37 (Dec. 31, 1959). (544)

Cost of shipping, methods of transportation, storage facilities, and new materials handling equipment are discussed.

SPRAY INSTEAD OF PAD? Textile Inds. 124: 99, 101 (Jan. 1960). (545)

The advantages claimed for the Unifog method of applying finishes by spraying include: low initial cost, low maintenance cost, reduced operating cost, chemical cost reduction, increased production, and new finishing effects.

BAKING IN RESIN FINISHING. PART 2. S. Iwasakai, H. Furusawa, and I. Fujita. J. Soc. Textile Cellulose Inds. Japan 15, No. 9: 754-758 (1959). In Japanese (English summary). Through BCIRA 39: 4565 (1959). (546)

Baking experiments were made on resin on clean glass and on cotton fabric. The reaction velocity constant agreed with the Arrhenius equation. Equations are given for the unimolecular reaction, and, from cumulative baking at various temperatures, for the cumulative reaction.

SYNTHETIC RESINS IN THE TEXTILE AND PAPER INDUSTRIES. G. Guillemaille. Teintex 24, No. 9: 609-629 (1959). In French. Through BCIRA 39: 4563 (1959). (547)

The review covers the main resins (thermoplastic and heat hardenable) used in the textile and paper industries.

THERMAL DECOMPOSITION OF SODIUM CHLORITE SOLUTIONS IN THE IMPREGNATION BLEACHING OF COTTON. F. Kassack and G. Berndt. Melliand Textilber. 40, No. 9: 1031-1035 (1959). In German. Through BCIRA 39: 4389 (1959). (548)

Differences have been found between the decomposition of chlorite in the liquor bleach and in the impregnation bleach. The formation of free chlorine dioxide in bleaching on rolls was less, and this indicates that the gas is consumed by the gray cloth, with formation mainly of chlorine ions. The low liquor ratio employed in the bleaching process permitted a successful investigation of the formation of hydrogen ions and their effects on alkaline, acid, and activator-containing chlorite solutions.

PREPARATION AND BLEACHING. PART 8. PRINCIPAL BLEACHING MATERIALS AND METHODS (contd). K. S. Campbell (N. C. State Coll. School of Textiles). Textile World 110: 95, 97 (Jan. 1960). (549)

The bleaching of cotton by combined hypochlorite-peroxide, methods based on sodium chlorite, and the use of ozone, sodium perborate, and peracetic acid is discussed.

CONTINUOUS BLEACHING OF COTTON FABRICS WITH AOZh-2 APPARATUS. L. A. Golovtseva, M. G. Shikher, and A. V. Surovaya. Tekstil. Prom. No. 5: 45-50 (1959). In Russian. Through BCIRA 39: 4216 (1959). (550)

Practical aspects of continuous bleaching with the Russian AOZh-2 plant are discussed, including consumption of alkali, consumption of acid, consumption of hydrogen peroxide, control of the process and efficient arrangement of the apparatus.

VAPOR PHASE CHLORITE BLEACHING METHOD. Industrie Textile: 533-537 (July 1959). In French. Through BCIRA 39: 4549 (1959). (551)

Principles, advantages, and main uses of the semi-continuous machine constructed by the Société M. T. R. are discussed. The impregnation of the fabric with sodium chlorite is effected in 2 phases (French Patent 1185987) in tanks made of plastic material which is resistant to chemicals as well as mechanical and thermal factors. Since impregnation is carried out in cold chlorite solution, there is no risk of chlorine dioxide liberation. Subsequent heat treatment (by direct steam) ensures excellent diffusion of the chemical products in the fiber, and swelling of the latter is often of advantage for subsequent treatments or for the final appearance of the fabric.

NEW ROLE FOR SOFTENING AGENTS IN TEXTILE FINISHING. PART 2. A. J. Hall. Textile Recorder 77: 63-64 (Jan. 1960). (552)

Application procedures and the effectiveness of various compounds for softening in resin finished fabrics are discussed. Graph, table, 7 refs.

IMPROVEMENT OF CREASE RESISTANT PROPERTIES OF CELLULOSE HYDRATE FIBERS DURING THE AMINOPLAST CONDENSATION IN SEALED SYSTEMS. E. Elöd and D. Herion. Melliand Textilber. No. 9: 1058-1068 (1959). In German. Through BCIRA 39: 4566 (1959). (553)

The condensation of aminoplasts in spun rayon fabrics between heated metal plates and finishing spun rayon fabrics at room temperature or in an atmosphere of superheated steam were studied. Interesting data on the course of the aminoplast condensation in the fabrics were obtained from model experiments in which the urea-formaldehyde resins were condensed in substance in sealed glass tubes. Formation of precondensates of aminoplasts and some analytical methods (e.g. nitrogen determination in aminoplasts, free formaldehyde, etc.) were also examined. The most important results are summarized. 48 refs.

DEVELOPMENT OF WASHABLE NON-IRON EFFECTS IN PURE WOOL FABRICS. A. J. Farnworth, M. Lipson, and J. R. McPhee (CSIRO Wool Research Labs., Australia). Textile Research J. 30: 11-22 (Jan. 1960). (554)

The use of reducing agents for setting wool has been extended to give washable non-iron effects on pure wool fabrics. Initially this was accomplished by applying the Si-Ro-Set process to garments made from shrinkproofed wool. This led to flat setting of fabrics in the mill by applying a dilute solution of a reducing agent to the fabric followed by immediate steaming on a blowing machine. This method of setting gives excellent washable non-iron effects on pure wool fabrics. Photos, tables, 27 refs.

ROT-RESISTANT FINISHES FOR COTTON. A. Ruperti (Ciba Ltd). Reply: W. N. Berard, G. A. Gautreaux, and W. A. Reeves (So. Reg. Research Lab.). (Letters to the editor). Textile Research J. 30: 68-71 (Jan. 1960). (555)

The use of formic acid colloids of methylolmelamine as compared to the Arigal process for rotproofing cotton is discussed.

OPEN-WIDTH WASHING. A. Freyberg. Melliand Textilber. 40, No. 8: 911-912 (1959). In German. Through BCIRA 39: 4546 (1959). (556)

Two open-width washing units of a new type, Cascade and Intensiva, which ensure highly satisfactory results in soaking and rinsing, are described and illustrated.

SOLVENT SCOURING OF WOOL. Can. Textile J. 76: 71-72 (Dec. 11, 1959). (557)

The author describes the operation of the Belgian Maertens and Swedish solvent extraction methods. Other recent literature on solvent extraction methods is briefly noted.

AERATION RECOVERY OF LANOLIN FROM WOOL SCOUR LIQUORS. C. A. Anderson (CSIRO Wool Research Labs., Australia). Textile Research J. 30: 51-57 (Jan. 1960). (558)

Further investigation of the aeration process has resulted in an improved design for a continuous recovery plant. On a pilot scale the improved design has permitted throughput rates about 2-1/2 times greater than previous designs, with equal recovery efficiencies. Photo, diagrs, graphs, tables, 2 refs.

STUDY OF THE REMOVAL OF METAL IONS FROM COTTON FABRICS. AATCC Rhode Island Sect. Am. Dyestuff Reptr. 48: 27-36 (Dec. 28, 1959). (559)

The relative efficiencies of 4 different chelating agent types when applied under various conditions of pH and temperature to cotton cloth of known contamination were examined. Chelating agents are effective in the removal of cations from cotton fabric, but their efficiencies are affected by various conditions of temperature and pH. Graphs, tables, 28 refs.

SYNTHETIC RESINS FOR CHLORINE-FAST WASH-AND-WEAR FINISHES. H. Enders and G. Pusch (Chemische Fabrik Pfersee GmbH). Am. Dyestuff Reptr. 49: 25-38 (Jan. 11, 1960). (560)

Translated by E. A. Parolla and C. Z. Draves from Melliand Textilber. No. 3: 314-322; No. 4: 429-431 (1959). See abstr. 2990/59. Photos, graphs, 8 refs.

FUNGICIDES AND BACTERICIDES: THEIR APPLICATIONS AND USES. C. C. Yeager (Scientific Oil Compounding Co.). Can. Textile J. 76: 42-46 (Dec. 25, 1959). (561)

The characteristics of a good textile fungicide and bactericide include: stability, efficacy, freedom from toxicity, freedom from odor, freedom from color, good hand, and freedom from damaging chemical effects on textiles. These factors are discussed in terms of commercial products now available, and the advantages of biocides in textile treatments are cited. Photos.

RELATION OF WET AND DRY CREASE RECOVERY TO WASH-WEAR BEHAVIOR. R. Steele (Rohm & Haas Co.). Textile Research J. 30: 37-46 (Jan. 1960). (562)

The wet:dry crease recovery relationship of cellulose fibers, its significance in wash and wear behavior of fabrics, and its relation to chemically produced changes in fiber structure are examined. It is concluded that concurrent increases in wet and dry recovery can be obtained by finishing agents which reduce interchain slippage, and the most effective agents are those which form covalent cross links between the cellulose chains. Cross-linking reagents applied to fabrics which are in the wet, swollen state yield a larger proportion of intramolecular reaction than the usual dry-state application. Wet cross-linked fabrics tend to be stabilized in the swollen state, so that moisture regain and swellability are enhanced. The latter property is largely responsible for their high wet crease recovery properties. Diagrs, graphs, tables, 25 refs.

SURFACE TREATMENTS FOR GLASS FIBERS. Fibres and Plastics 20: 368-370 (Dec. 1959). (563)

Surface treatments for glass fibers are reported which are designed to aid their incorporation into reinforced plastics and to lead to products with improved performance.

Dyeing and printing D2

PHOTOGRAPHIC DEVELOPMENT OF INDIGOSOLS AND RAPIDAZOL DYES. E. Frieser. Z. ges. Textil-Ind. 61, No. 16: 637-658 (1959). In German. Through BCIRA 39: 4560 (1959). (564)

Methods for the photographic development of Indigosol and Rapidazol dyes are reviewed, with special reference to the patent literature.

HISTORY OF THE FORMATION OF INSOLUBLE AZOIC DYES IN PRINTING. A. Wiasmitinow. Rev. Textilis 15, No. 9: 13-24 (1959). In French. Through BCIRA 39: 4561 (1959). (565)

This is a review of the attempts made to form insoluble azoic dyes, during dyeing and printing, on vegetable fibers. The period 1878-1956 is covered.

KINETICS OF DYEING WITH REMAZOL REACTIVE DYES. E. Bohvert and R. Weingarten. Melliand Textilber. 40, No. 9: 1036-1042 (1959). In German. Through BCIRA 39: 4392 (1959). (566)

The concurrent dyestuff-fiber and dyestuff-water reactions involved in dyeing with Remazol dyes have been studied under various conditions by means of physico-chemical methods. A measurement of the energy of activation for these reactions showed that Remazol dyes react preferentially with the fiber.

POINTERS FOR APPLICATION OF CIBACRON DYES. P. Ulrich. Textil-Rundschau 14, No. 8: 427-436 (1959). In German. Through BCIRA 39: 4391 (1959). (567)

The article deals with the following aspects of Cibacron reactive dyes: methods of application, classification according to exhaustibility, fixation, and fastness properties.

STUDIES ON HAEMATOXYLIN AND HAEMATEIN, THE COLORING PRINCIPLES OF LOGWOOD. PART 2. BEHAVIOR IN AQUEOUS SOLUTIONS AT VARYING pH, AND THE pK VALUES. G. C. Lalor and S. L. Martin (Univ. Coll. West Indies). J. Soc. Dyers Colourists 75: 517-521 (Nov. 1959). (568)

Graphs, 10 refs.

REMAZOL LINKAGE. E. Bohnert (Farbwerke Hoechst AG). J. Soc. Dyers Colourists 75: 581-585 (Dec. 1959). (569)

A short introduction to the chemistry of the Remazol reactive dyes is followed by an explanation of their behavior when applied to cellulosic fibers. An indication is given of the position of Remazol dyes in the general picture of reactive dyes and how they differ from other ranges. Evidence is provided which indicates that a covalent linkage with the cellulose is formed during dyeing. Methods for dyeing fibers other than cellulose are described. 4 refs.

AGING OF VARIOUS SULFUR DYES. R. M. Sheftel and I. L. Khmelnitskaya. Tekstil. Prom. No. 6: 46-48 (1959). In Russian. Through BCIRA 39: 4227 (1959). (570)

Experiments are described to show the instability of sulfur dyes exposed to humidity and air for periods of 20-40 days.

A REVIEW OF THE BRITISH DYEING INDUSTRY WITH PARTICULAR REFERENCE TO MANMADE FIBERS. W. Russell. Textile J. Australia 34: 1138-1143 (Nov. 20, 1959). (571)

DYEING OF POLYESTER FIBERS WITH DISPERSE DYES. H. Riding (Sandoz Ltd). Dyer 123: 57 (Jan. 1, 1960). (572)

The use of carriers and high temperature dyeing to increase dye penetration and lightfastness is discussed briefly.

MECHANISM OF DYEING WITH PROCION DYES. H. H. Sumner. Dyer 123: 29 (Jan. 1, 1960). (573)

The basic principles underlying the application of Procion dyes to cellulose fibers are summarized.

ONE-BATH METHOD OF DYEING BLENDS OF ACRYLIC AND CELLULOSIC FIBERS WITH DEORLENE AND CHLORANTINE FAST DYES. H. Stern (Ciba Ltd). Ciba Rev. 12, No. 134: 37 (Oct. 1959). (574)

Recent trials have shown that it is possible to dye by a 1-bath method, using Deorlene and acid-dyeing Chlorantine Fast dyes in the presence of Albatex HW.

NEW METHOD OF DYEING WITH VAT DYES BY MEANS OF PAD-STEAM OR PAD-ROLL INSTALLATIONS. F. L. J. van Lamoen and H. Borsten. Tex 18, No. 9: 1137-1142 (1959). In Dutch. Through BCIRA 39: 4551 (1959). (575)

A new 1-bath method for continuous vat dyeing is described, which can be carried out in both pad-steam and pad-roll installations. The bath contains both the nonreduced dye and the chemicals necessary for the reduction; intermediate drying is omitted.

DYEING OF CELLULOSE ACETATE WITH DISPERSE DYES. PART 8. DETERMINATION OF FIBER SATURATION VALUES. C. L. Bird, H. K. Partovi, and G. Tabbron (Leeds Univ.). J. Soc. Dyers Colourists 75: 600-604 (Dec. 1959). (576)

Fiber saturation values have been determined at 60° and 80° C, in presence of a dispersing agent, for 15 disperse dyes on secondary cellulose acetate. In most cases the results agree with those obtained by calculation from aqueous solubilities and partition coefficients in the absence of dispersing agent. When a fiber saturation value is determined by means of a single dyeing carried out in presence of a large amount of commercial dye, the result may be much too high owing to the presence of colored impurities and shading components and the absence of sufficient dispersing agent to stabilize the concentrated dispersion and so prevent surface adsorption of dye by the fiber. Photomicrographs, graphs, tables, 15 refs.

RECENT DEVELOPMENTS IN WOOL DYEING. W. Beal (Geigy Co. Ltd). Textile Recorder 77: 58-59, 62 (Jan. 1960). Dyer 123: 27-28 (Jan. 1, 1960). (577)

Recent work on continuous dyeing methods, solvent assisted dyeing, and acid dyeing techniques for wool are outlined. Diagrs.

CONDITIONS FOR DYEING DEAD COTTON FIBERS. N. P. Solovyov, N. G. Lysova, and M. N. Nikulova. Tekstil. Prom. No. 6: 43-46 (1959). In Russian. Through BCIRA 39: 4220 (1959). (578)

To obtain satisfactory results the dead fibers have to be thoroughly cleaned and opened and dried at a temperature over 100° C.

DYEING POLYESTER FIBERS ALONE AND IN MIXTURES WITH OTHER FIBERS. W. Kunze. Reyon Zellwolle Chemiefasern 9, No. 8: 528-534; No. 9: 606-610 (1959). In German. Through BCIRA 39: 4556 (1959). (579)

Methods of dyeing Trevira filament and staple yarns, alone and in blends with cotton, rayon, and wool, as well as fabrics, are reviewed.

DYEING AND FINISHING ORLON FIBERS IN BLENDS WITH CELLULOSE FIBERS. H. G. Fröhlich. Z. ges. Textil-Ind. 61, No. 16: 649-653 (1959). In German. Through BCIRA 39: 4557 (1959). (580)

Directions are given for dyeing and finishing of fabrics made from Orlon/cotton (80:20) and Orlon/spun rayon (75:25).

IMPROVING THE WETFASTNESS OF DYEINGS AND PRINTS. H. U. Schmidlin (Ciba Ltd). Ciba Rev. 12, No. 134: 38-40 (Oct. 1959). (581)

The use of available chemical agents for the after-treatment of dyeings and printings on cellulose, polyamide, wool, silk, and Acrilan fibers is summarized. Table.

WHITE RESISTS UNDER CIBACRON PAD-DYEINGS. Ciba Ltd. Ciba Rev. 12, No. 134: 45-47 (Oct. 1959). (582)

The most suitable resisting agents for various Cibacron dyes are indicated. Tables.

MODERN PIECEGOODS DYEING TECHNIQUES. F. Hagen (Friedrich Haas GmbH). Textile Merc. 141: 718-720 (Nov. 27, 1959). (583)

The development of 3-bowl padders with triangular and with straight, but oblique, bowl arrangements for achieving satisfactory liquor circulation for use with substantive dyestuffs is traced and their advantages are cited. Photos, diagrs.

NEW DYEING MACHINES MADE IN POLAND. Z. Wroclawski. Przeglad Wlok. No. 4: 189-192 (1959). In Polish. Through BCIRA 39: 4225 (1959). (584)

Dye winches BC-2 and BC-3 and a dye jig BK-1, for piece goods, are described.

SELECTED DYESTUFFS FOR DYEING WOOLED SHEEPSKINS. W. Haldemann (Ciba Ltd). Ciba Rev. 12, No. 134: 40-43 (Oct. 1959). (585)

Suitable dyes and procedures are outlined.

VACUUM DYEING OF FABRICS. N. D. Ilyashuk. Tekstil. Prom. No. 7: 65-67 (1959). In Russian. Through BCIRA 39: 4218 (1959). (586)

Degasified fibers absorb dyes in vacuum more readily than under atmospheric conditions. 15 refs.

FIBER REACTIVE DYES. PART 3. PRINTING WITH THE FIBER REACTIVES. Textile Inds. 124: 74-80 (Jan. 1960). (587)

To serve as a basis of comparison for the fiber reactive dyes, the most important color classes used for printing cotton fabrics are listed with general comments on their application, fastness properties, and economics. This is followed by a discussion of color formulations, thickeners, printing, aging, and soaping problems as related to the fiber reactive dyes. Photos.

PRINTING WITH CIBACRON DYES. Ciba Ltd. Ciba Rev. 12, No. 134: 44-45 (Oct. 1959). (588)

Observations on the use of urea in Cibacron printing pastes, production of black outlines, crisp prints on fabrics with raised designs, and the use of a new washing off agent are reported.

PHYSICAL STATE OF DIRECT DYES IN VISCOSE AND ITS INFLUENCE ON LIGHTFASTNESS. PART 1. METHOD OF EXAMINING THE PHYSICAL STATE OF DIRECT DYES IN VISCOSE. PART 2. THE RELATION BETWEEN THE PHYSICAL STATE OF DIRECT DYES IN VISCOSE AND LIGHTFASTNESS. L. Weissbein and G. E. Coven (Am. Cyanamid Co.). Textile Research J. 30: 58-62; 62-66 (Jan. 1960). (589)

A method of examining the physical state of direct dyes in viscose, which makes use of dyed ultrathin films as primary specimens in the electron microscope, is described. The electron microscopical examination of dyed ultrathin viscose films combined with lightfastness measurements on corresponding rayon dyeings were used to examine several direct dyes of diverse chemical structure. The apparently unaggregated dyes exhibited considerably poorer lightfastness on rayon than the others which aggregated in viscose. The results support the idea that the physical state of direct dyes in viscose is an important factor in determining their lightfastness on this material. Photos, photomicrographs, 27 refs.

OBTAINING PRINTED DESIGNS ON FABRICS WITH A PERMANENT GLAZE. P. I. Konkov. Tekstil. Prom. No. 5: 58-62 (1959). In Russian. Through BCIRA 39: 4233 (1959). (590)

COLORED DISCHARGES ON POLYAMIDE FABRICS WITH ANTHRASOL DYES. E. Fees. Melliand Textilber. 40, No. 9: 1042-1045 (1959). In German. Through BCIRA 39: 4398 (1959). (591)

Colored discharges with Anthrasol dyes can be printed on nylon fabrics that have been dyed with dischargeable dyes. The discharge prints have good brilliance and sharpness of definition.

EFFECT OF LUBRICANTS ON THE DRY CROCKING FASTNESS OF CHROMIUM DYEINGS. J. Slezak. Textil 14, No. 6: 227-232 (1959). In Czech. Through BCIRA 39: 4594 (1959). (592)

The experiments described show that spinning oils, especially mineral oils, adversely affect the dry crocking fastness of chromium dyeings on wool and worsted fabric. This is especially pronounced in fabrics made of yarns which have not been subjected to any further treatment.

PHYSICAL STATE OF DIRECT DYES IN VISCOSE RAYON AND ITS INFLUENCE ON LIGHTFASTNESS. L. Weissbein (Am. Cyanamid Co.). (Letter to the editor). J. Soc. Dyers Colourists 75: 537 (Nov. 1959). (593)

CHECK ALL THESE FACTORS TO INSURE BETTER LIGHTFASTNESS. A. J. Hall. Textile World 110: 100-101 (Jan. 1960). (594)

The influence of dye particle size, fiber additives, dyeing assistants, and climate on the lightfastness of dyed textiles is summarized. Tables.

TECHNIQUE OF FAULT INVESTIGATION IN WOOL DYEING. D. K. Clough (Sandoz Ltd). Dyer 123: 23-25 (Jan. 1, 1960). (595)

Methods of determining the causes of dyeing defects due to wool damage are described. Faults due to mechanical causes, uneven modification of the chemical affinity of the fabric for dyes, to the presence of contaminants, and to atmospheric conditions are covered.

PROBLEM OF SYNTHETIC FIBERS IN PROCESSING RECOVERED WOOL. J. G. Lee (L. B. Holliday & Co.). Dyer 123: 59-61 (Jan. 1, 1960). (596)

The difficulties encountered in dyeing reprocessed wool due to the presence of contaminating synthetic fibers are discussed. Methods for the detection of faulty pieces and the identification of the undesirable fibers, as well as practical methods for covering them, are described.

Drying, setting, conditioning D4

INFRARED AND ALLIED HEATING METHODS IN THE PROCESSING OF TEXTILES. G. H. Moule. Textile Merc. 142: 41, 43-44 (Jan. 8, 1960). (597)

Infrared heating is defined, and its advantages, sources, applications, and economics are discussed. Photo, graph.

STRAINLESS DRYING ON THE CYLINDER DRYING MACHINE. E. Löhmer. Melliand Textilber. 40, No. 9: 1055-1057 (1959). In German. Through BCIRA 39: 4406 (1959). (598)

The article describes the advantages of supplementing the method of cylinder drying by the use of superheated steam.

RUSSIAN SKB-6 DRYING MACHINE. A. T. Shapobalov. Tekstil. Prom. No. 7: 75-76 (1959). In Russian. Through BCIRA 39: 4242 (1959). (599)

A description is given of a new hot air drying machine.

HIGH FREQUENCY ELECTRONIC DRYER FOR FILAMENT RAYON. H. Morris (New Rochelle Tool Corp.). Am. Textile Reptr. 74: 19, 23, 75 (Jan. 14, 1960). (600)

The Thermatool unit is a combined high frequency oscillator, cake conveyor, and heat recovery system. Its features and advantages are cited. Photos, diagr.

APPLICATION OF GAS HEAT TO FINISHING MACHINERY. J. W. Powischill and C. I. Geibel (Proctor & Schwartz Inc.). Can. Textile J. 76: 47-51 (Dec. 25, 1959). (601)

The factors accounting for the increased use of gas heated dryers in the textile industry, their applications, the basic systems used, and their safety features are discussed.

HIGH-SPEED DRYER FOR PACKAGE DYED YARNS. Cosa Corp. Knitted Outerwear Times 28: 87 (Jan. 25, 1960). (602)

The Secomat is a 2-unit, semi-automatic machine. The yarn packages are first centrifuged and then dried by steam heated dry air which flows from the inside of the spool to the outside.

TESTING AND MEASUREMENT E

REVOP: RANDOM EVOLUTIONARY OPERATION. F. E. Satterthwaite. Statistical Engineering Inst., 8 Fuller Road, Wellesley, Mass. 1959. 41 p. $4.00. (603)

A presentation of examples showing how to use the author's method of random-balance experimental design for multi-factor investigations as applied to evolutionary process operation. Written to be understood by the layman in statistics.

BULLET-FAST TESTS SPEED FIBER RESEARCH. Chem. Week 86: 55-59 (Jan. 16, 1960). (604)

Ballistic tests at Fabric Research Labs simulate the rough treatment that yarns get in modern high-speed textile machinery. Other laboratory tests which help in predicting a fiber's commercial future are mentioned, and steps in a fiber evaluation program are outlined.

TEXTILE SLIDE RULE SPEEDILY SOLVES CALCULATIONS. Textile Mfr. 85: 496-499 (Nov. 1959). (605)

The applications of the slide rule to the calculation of loom efficiency, yarn count conversions, yarn and fabric weights, twist, and moisture regain are illustrated by examples. Diagrs.

STATISTICAL QUALITY CONTROL IN COTTON MARKETING. D. C. Luan. Cotton Economic Research, Univ. of Texas, Austin, Texas, in cooperation with the Cotton Research Committee of Texas. Oct. 1959. 187 p. Research report no. 50. (606)

This study is primarily concerned with the application of statistical quality control techniques to measurements made possible by using objective methods. Through the use of this technique, it is believed the problem and cost of the cotton merchant associated with finding and classifying the right kind of cotton for a customer will be reduced. Contents: introduction, cotton classification and classification techniques, variation in fiber properties, variations in fiber properties of even-running cotton, error of measurement in fiber testing, utilization of the measurement of cotton's characteristics, forward sales and the problems of the cotton merchant, and cotton merchandising in action.

PHYSICAL METHODS OF INVESTIGATING TEXTILES. R. Meredith and J. W. S. Hearle, ed. Textile Book Publishers, Inc., 250 Fifth Ave., New York 1, N. Y. 1959. 411 p. $13.00. (607)

Contents: X-ray techniques; Infrared spectroscopy; Electron microscopy; Optical microscopy; Fiber dimensions; Density, moisture, and swelling; Yarn and fabric structure; Mechanical properties of fibers and yarns; Some mechanical properties of fabrics; Transmission of heat, moisture, and air; Frictional behavior of textiles; Optical properties; Electrical properties; Applications of nuclear physics. References.

PHYSICAL TEXTILE TESTING. Ciba Rev. 12, No. 134: 2-35 (Oct. 1959). (608)

Aims, problems, and limitations of physical textile testing, by E. Wagner, p. 2-5; History of textile testing, by E. Wagner, p. 6-14; Basic problems and methods of physical textile testing, by H. J. Juilfs, p. 15-28; Physical testing for the finisher, by H. Modlich, p. 29-35. Photos, diagrs, tables.

Fibers E1

PRACTICAL TESTS AND DETERMINATION OF FIBER DENSITY. PART 1. BASIC PRINCIPLES: SUSPENSION METHOD. PART 2. PRACTICE AND APPLICATION: EXAMPLES. J. Juilfs. Melliand Textilber. 40, No. 9: 963-966; No. 10: 1136-1139 (1959). In German. Through BCIRA 39: 4578 (1959). (609)

The gradient method of determining the specific gravity of fibers is discussed in part 1. Part 2 gives the specific gravity of many different types of fibers measured by a common method. Values are given for fibers in the bone-dry state and with standard regains. Examples are given to demonstrate methods of determining structural variations.

STUDY OF THE MECHANICAL PROPERTIES OF TEXTILE FIBERS. PART 1. YOUNG'S LOGARITHMIC MODULUS. K. Higuchi and H. Takai. J. Textile Machy. Soc. Japan 12, No. 9: 1-5 (1959). In Japanese (English summary). Through BCIRA 39: 4254 (1959). (610)

This modulus, derived from a study of load extension curves and utilizing logarithmic longitudinal and lateral strains and logarithmic Poisson's modulus, is defined and agrees well with a tensile test on a specimen of nylon 6.

EFFECT OF FIBER LENGTH ON THE 1/8 INCH PRESSLEY INDEX. F. Hadwich. Z. ges. Textil-Ind. 61, No. 17: 684-685 (1959). In German. Through BCIRA 39: 4579 (1959). (611)

Contrary to previous findings (see abstr. 1786/59), the bundle strength of cotton fibers determined on the Pressley tester decreases by about 31.6% at a test length of 1/8 in. (staple length of the fibers 15.0 mm) as compared with the strength at a zero test length (staple length 11.8 mm). A relationship between this strength decrease (Factor F), on the one hand, and the fiber length, on the other, has not been observed.

PNEUMATIC-AUTOMATIC MICRONAIRE MODEL 70502. B. Fischer. Melliand Textilber. 40, No. 8: 849-851 (1959). In German. Through BCIRA 39: 4580 (1959). (612)

The new Micronaire (Sheffield, Dayton, Ohio), features of its design and operation, and its advantages over the older testers, are discussed in detail.

QUANTITATIVE CHEMICAL ANALYSIS OF BINARY MIXTURES OF CELLULOSE TRIACETATE AND CERTAIN OTHER FIBERS. J. Textile Inst. 50: P754-P758 (Dec. 1959). (613)

Tentative textile standard no. 57. This method applies to binary mixtures of cellulose triacetate with wool, cotton, polyamide, polyester, regenerated protein, acrylic, and viscose rayon fibers. It is suitable for application to fibers in any textile form, e.g., tow, sliver, roving, yarn, or fabric.

QUANTITATIVE CHEMICAL ANALYSIS OF MIXTURES OF CELLULOSE TRIACETATE AND SECONDARY CELLULOSE ACETATE FIBERS. J. Textile Inst. 50: P759-P762 (Dec. 1959). (614)

Tentative textile standard no. 58.

DETERMINATION OF THE TENSILE PROPERTIES OF INDIVIDUAL TEXTILE FIBERS AND FILAMENTS. J. Textile Inst. 50: P776-P780 (Dec. 1959). (615)

Tentative textile standard no. 61. This specification deals with the determination of the tensile properties of individual fibers of all types, including crimped fibers, by means of constant-rate-of-loading machines and constant-rate-of-extension machines.

IDENTIFICATION OF UNKNOWN SYNTHETIC FIBERS. PART 3. REVISION AND APPLICATION OF MICROFUSION. S. G. Smith (Security Mills). Am. Dyestuff Reptr. 48: 23-26 (Dec. 28, 1959). (616)

Parts 1 (abstr. 1348/58) and 2 (abstr. 1790/59) described data relating to the qualitative analysis of man-made fibers by light microscopy. This paper is a revision which includes the latest fibers, and utilizes the method of microfusion in addition to observations of fiber morphology, behavior under polarized light, optic sign, refractive index, and solubility. A systematic method is presented for the identification of 25 fibers by group separation and confirmatory tests. Tables, 15 refs.

APPLICABILITY OF THE ALKALINE THIOGLYCOLLATE EXTRACTION TEST FOR DETECTION OF WOOL DAMAGE. K. Wegjan and H. G. Fröhlich (Forschungsinstitut der Hutindustrie EV). (Letter to the editor). Textile Research J. 30: 73-74 (Jan. 1960). (617)

DIFFRACTION METHOD FOR THE MEASUREMENT OF DIAMETER CHANGES IN STRAINED FIBERS. V. V. Davis (Shirley Inst.). J. Textile Inst. 50: T688-T694 (Dec. 1959). (618)

A method has been devised for measuring the change in diameter of single fibers with strain, based on the change in spacing of a diffraction pattern produced by the fiber. Results have been obtained with black nylon and Terylene at 65% rh and 68° F. Diagrs, graphs, 4 refs.

DETERMINATION OF THE DEGREE OF SETTING OF PERLON BY CROSS-SECTION SWELLING. H. Modlich. Melliand Textilber. 40, No. 8: 906-911 (1959). In German. Through BCIRA 39: 4584 (1959). (619)

Known methods for determining the degree of setting of Perlon are discussed, and tests are described in which swelling of Perlon fibers treated under different conditions with dry or wet heat were studied. A method was developed which permits an accurate determination of the degree of swelling of the cut ends of Perlon fiber in dilute sulfuric acid at a certain concentration and, consequently, the degree of setting. This method is applicable to Perlon fabric treated both with dry heat and saturated steam. The swollen fiber can be regarded as correctly set if the cut fiber ends show under the microscope only a hardly perceptible protrusion. Insufficiently set fibers are identified by formation of calix- or fan-shaped cut ends.

Yarns E2

QUALITY CONTROL IN SPINNING: METHOD OF MODIFYING TEST PROCEDURE. T. W. Walker. Textile Weekly 60(1): 70, 72, 77 (Jan. 8, 1960). (620)

An account of an investigation which was made to prove the hypothesis that testing room conditions could seriously affect count control, and to find a basis for calculating corrections to be used in order to adjust wrapping counts, found by the normal mill testing method, so that the real count of yarn in the package would be known. In addition, there is an example of the actual application of the method over a number of years. Tables.

INTRODUCTION OF THE TEX YARN NUMBERING SYSTEM. Can. Advisory Comm. on ISO/TC 38. Can. Textile J. 76: 59-63 (Dec. 11, 1959). (621)

The tex system is described. Its advantages and the 3 stages for its introduction are explained. Included in the appendixes are a table for the conversion to rounded tex numbers, examples of spinning layouts in traditional numbering systems and in tex, and a brief list of papers on the tex numbering system. 9 refs.

PROVISION FOR A CONTROL OF YARN COUNT. Dutch Standardization Inst. Tex 18, No. 9: 1143-1152 (1959). In Dutch. Through BCIRA 39: 4583 (1959). (622)

The draft specification 3185-59 describes the method for determining and controlling the mean count of a yarn batch, taking into account scattering of the values within certain limits. The method can be used for all yarn types whose weight per length unit does not exceed 2,000 tex. The draft is based on the first paragraph of the ISO Draft Recommendation No. 194: Method for the determination of linear density (mass per unit length) of yarns from packages--skein method.

DETEXOMAT WARP INSPECTOR. Qualitex (Engineers) Ltd. Hosiery Trade J. 67: 74-75 (Jan. 1960). Hosiery Times 33: 43-44 (Jan. 1960). (623)

The use of the Detexomat inspector in conjunction with warping machines is explained, and the operation and features of the electronic device are described.

EFFECTS OF GAGE LENGTH AND RATE OF EXTENSION ON TENSILE STRENGTH AND ELONGATION OF FILAMENT YARNS. A. Aino, C. Nozaki, and H. Horasawa. J. Textile Machy. Soc. Japan 12, No. 9: 6-13 (1959). In Japanese (English summary). Through BCIRA 39: 4262 (1959). (624)

Silk (raw and degummed), rayon (viscose, cuprammonium, acetate, and triacetate), nylon 6, polyester, polyacrylonitrile, and polyvinyl-vinylidene chloride yarns were examined on an Instron tester at gage lengths of 5, 10, 15, and 20 in. and elongation rates of 1, 2, 5, 10, and 20 in./min. Analysis of the results shows that the strength increases with rate of extension (cf. Meredith) and decreases with increase of gage length (cf. Peirce). The effect of gage length on the elongation is larger than its effect on strength, and the effect of rate of extension on elongation varies according to specimen.

DIRECT METHOD FOR MEASURING YARN DIAMETERS AND BULK DENSITIES UNDER CONDITIONS OF THREAD FLATTENING. J. B. Hamilton (Courtaulds Ltd). J. Textile Inst. 50: T655-T672 (Dec. 1959). (625)

As a basis for studies of fabric structure, a method has been devised whereby measures of both major and minor thread diameters may be obtained from small samples of yarn, under conditions of thread tension and compression which may be controlled to produce thread flattening similar to that which occurs particularly in weaving, but also in package winding, warping, and knitting. These diameters may be applied directly to fabric geometry, or, by combining with yarn count or denier measured over the same length of yarn, may be used to calculate bulk density of the yarn and hence density of fiber packing. Photo, diagrs, graphs, tables, 12 refs.

ELECTRONIC MOISTURE GAGE FOR RUNNING TIRE YARN. G. J. Hilferink. Enka Breda Rayon Rev. 13: 34-39 (Nov. 1959). (626)

The moisture gage described is primarily intended for testing singles on the slasher after the dryer, but it is also useful for testing singles in the laboratory, e.g. when it is necessary to check up on the distribution of moisture in rayon yarn packages with reference to the conditioning time. Photos, diagrs.

METHODS OF DETECTION OF YARN IRREGULARITIES. F. M. Markov. Tekstil. Prom. No. 6: 77 (1959). In Russian. Through BCIRA 39: 4261 (1959). (627)

The author discusses how to obtain representative samples of sliver or roving for irregularity determination.

SOME RAPID METHODS OF EVALUATION AND CONTROL OF YARN QUALITY IN JUTE MILLS. M. K. Sen (Indian Jute Mills' Assoc. Research Inst., Calcutta). Textile Dig. 20: 115-121 (July-Sept. 1959). (628)

The IJMARI moisture meter, yarn irregularity tester, and slub counter are discussed.

Fabrics E3

MICROSPECTROPHOTOMETER IN STUDYING CERTAIN DEFECTS IN TEXTILES. N. Iwanow and R. Schneider. Teintex 24, No. 9: 603-606 (1959). In French. Through BCIRA 39: 4588 (1959). (629)

The use of the electronic Lison histophotometer in detecting streaks in dyed wool tricot is described.

METHOD OF TEST FOR THE MEASUREMENT OF THE PORE SIZE OF FABRICS (BUBBLE PRESSURE TEST). J. Textile Inst. 50: P763-P767 (Dec. 1959). (630)

Tentative textile standard no. 59.

INTERLABORATORY TRIAL OF THE PORE SIZE (BUBBLE PRESSURE) TEST. J. Textile Inst. 50: P768-P771 (Dec. 1959). (631)

METHOD OF TEST FOR THE DETERMINATION OF STIFFNESS OF CLOTH. J. Textile Inst. 50: P772-P775 (Dec. 1959). (632)

Tentative textile standard no. 60. This specification defines a method for the determination of the bending length and flexural rigidity of textile fabrics by means of a fixed-angle flexometer. For the majority of fabrics, the bending length will not exceed 10 cm, in which case the overhanging length will not exceed 20 cm. The method is not applicable to fabrics that curl or twist badly when cut into small pieces, nor to fabrics that show a noticeable time effect when allowed to bend under their own weight.

NEW METHOD OF TEST FOR YARN SLIPPAGE IN WOVEN FABRICS. L. S. Veer. Enka Breda Rayon Rev. 13: 17-27 (Nov. 1959). (633)

The factors affecting yarn slippage are considered, and the AKU method for measuring this property, especially in net-curtaining and plain weave fabrics, is described. Photos, diagrs.

KNITTED FABRIC ANALYSIS: FANCY RIB. R. W. Mills. Hosiery Times 33: 51-52, 54 (Jan. 1960). (634)

The technique of analyzing rib and fancy tuck rib effect fabrics is described. Photo, diagrs.

Other E4

pH MEASUREMENTS WITH THE BISMUTH ELECTRODE IN ALKALINE BATHS. E. Nebe. Melliand Textilber. 40, No. 8: 920-921 (1959). In German. Through BCIRA 39: 4547 (1959). (635)

Measurements with a bismuth electrode on detergents containing surface-active substances have shown that the electrode is suitable for use in textile processing baths in the pH range 7-14.

METHODS FOR DETECTION OF SI-RO-SET TREATMENT IN WOOL FABRICS. T. Gerthsen and H. Zahn (Deutsches Wollforschungsinstitut an der Technischen Hochschule). (Letter to the editor). J. Soc. Dyers Colourists 75: 604-605 (Dec. 1959). (636)

The use of paper chromatography for the detection of the mixed disulfide formed in Si-Ro-Set treatment of wool is described. Diagr, 5 refs.

CHEMICAL FINISHING OF CELLULOSE FIBERS WITH PARTICULAR REFERENCE TO THE EVALUATION OF SUITABLE TEST METHODS. K. May, O. Rothe, and L. May. Melliand Textilber. 40, No. 8: 899-905; No. 9: 1069-1073 (1959). In German. Through BCIRA 39: 4567 (1959). (637)

The physical and chemical processes involved in resin finishing, and the various methods used to improve the crease resistance and allied properties of textiles, are discussed. The article is devoted mainly to test methods employed, including analysis of precondensates and resin hydrolysates, with special reference to chromatographic and electrophoretic test methods; control of finishing by testing the precondensates and their liquors, and evaluation of the treated goods; serviceability tests; resin distribution; resin content of fabric; penetration of resin into the fiber; degree of condensation; wash resistance of embossed and other fancy resin finished fabrics; chlorine retention, and odor formation.

DETERMINATION OF THE DISTRIBUTION OF THERMOSETTING RESINS IN FABRICS FROM REGENERATED CELLULOSE AND COTTON BY MEANS OF RADIOACTIVE ISOTOPES. PART 2. H. Enders and R. Zörkendörfer. Melliand Textilber. 40, No. 9: 1076-1082 (1959). In German. Through BCIRA 39: 4400 (1959). (638)

This further report of an investigation using resins labeled with radioactive carbon is illustrated by fabric cross-sections. See also abstr. 921/58.

PRACTICAL EXPERIENCES WITH COLOR MEASUREMENTS IN DYEING. A. Brockes. Melliand Textilber. 40, No. 9: 1049-1055 (1959). In German. Through BCIRA 39: 4558 (1959). (639)

Color measurement methods which proved satisfactory in production control are reviewed, with special reference to the 3-filter devices available and to the General Electric Co. recording spectrophotometer with X, Y, Z-integrator. Particular attention is paid to the condition of the samples before measurement, the main uses of color measurement, matching of dyed samples, control of color standards, the measurement of white samples, and the problems involved in measuring fluorescent samples.

VARIATIONS IN THE ASSESSMENT OF LIGHTFASTNESS EXPOSURES. K. McLaren (Imp. Chem. Inds. Ltd). J. Soc. Dyers Colourists 75: 597-599 (Dec. 1959). (640)

Ten specimens exposed against the lightfastness standards have been assessed by 72 observers by the method described in B.S. 1006:1955. The results are expressed in conventional statistical terms, and their significance is discussed. The most important factor affecting the agreement among assessors was off-tone fading, which caused a considerable reduction in agreement. The amount of experience the assessor possessed was generally quite unimportant. Tables, 5 refs.

STUDIES ON HAEMATOXYLIN AND HAEMATEIN, THE COLORING PRINCIPLES OF LOGWOOD. PART 1. ABSORPTION SPECTRA OF PURE COMPOUNDS IN VARIOUS SOLVENTS AND A SPECTROPHOTOMETRIC METHOD OF ANALYSIS FOR HAEMATOXYLIN AND HAEMATEIN. G. C. Lalor and S. L. Martin (Univ. Coll. West Indies). J. Soc. Dyers Colourists 75: 513-517 (Nov. 1959). (641)

Graphs, table, 10 refs.

XENON ARC FADING LAMPS. K. McLaren (Imp. Chem. Inds. Ltd). J. Soc. Dyers Colourists 75: 594-596 (Dec. 1959). (642)

The first two models of commercially available fading lamps based on xenon arcs have been studied to determine how closely they approach the conditions necessary to duplicate an average daylight exposure in the United Kingdom. Modification of the original lamp design is necessary to obtain the required effective humidity. Graph, 7 refs.

MILL MANAGEMENT F

Industrial engineering F1

PROCESS COSTING: A VITAL FACTOR IN FLAX MILL MANAGEMENT. S. A. G. Caldwell. Textile Recorder 77: 50-52, 57 (Jan. 1960). (643)

The need for maintaining adequate costing systems in flax spinning mills and a basis on which such systems can be installed are discussed.

COST CONTROL TECHNIQUES AND PRODUCTIVITY IN TEXTILE INDUSTRY. M. S. Srinivasan (Nat. Productivity Council, India). Textile Dig. 20: 123-130 (July-Sept. 1959). (644)

Suggested cost control techniques for the Indian textile industry.

TIME STUDY MANUAL FOR THE TEXTILE INDUSTRY. N. L. Enrick, ed. for the Southern Textile Methods & Standards Assoc. Textile Book Publishers Inc., New York. 1960. 216 p. (645)

A special time study manual, written from the viewpoint of the problems of continuous and semi-continuous processing and the complex operator-machine cycles encountered in the textile industry. The manual was prepared by 27 contributors and is based on actual application experience in the textile industry.

COMPARISON AND SELECTION OF INVESTMENT PROJECTS. W. Zandbergen. Enka Breda Rayon Rev. 13: 30-33 (Nov. 1959). (646)

Some of the criteria affecting decision making on capital expenditures are examined, with emphasis on rentability risk and the duration of this risk.

QUALITY EXHIBITION AS A MEANS OF IMPROVING THE QUALITY OF WORK. J. Hulsebosch. Enka Breda Rayon Rev. 13: 40-44 (Nov. 1959). (647)

The use of a permanent quality exhibition for the introduction and instruction of new operatives in fabric and yarn defects and for the systematic reinstruction of older operatives is explained. Photos.

Plant and equipment F2

MULTIDISC DISPERSER OF MOISTURE. V. M. Freidin. Tekstil. Prom. No. 5: 70-72 (1959). In Russian. Through BCIRA 39: 4275 (1959). (648)

The design and performance of a humidifying unit operating on the spinning-disc principle are described.

ENGINEERED LUBRICATION IN THE TEXTILE INDUSTRY. L. G. Compton (Pure Oil Co.). Textile Bull. 86: 61-65 (Jan. 1960). (649)

The procedure for setting up an engineered lubrication program is outlined, the results to be expected are noted, and pointers for lubricating opening through weaving machinery are given.

SCIENCES G

Chemistry G1

SOME FACTORS IN THE MEASUREMENT OF THE SUSPENDING POWER OF AQUEOUS DETERGENT/FABRIC SYSTEMS. A. S. Weatherburn and C. H. Bayley (Nat. Research Coun., Canada). J. Am. Oil Chemists Soc. 37: 20-27 (Jan. 1960). (650)

A modified method, using multiple washes with very low concentrations of soil, is proposed. Two commonly used artificial soils are compared. Micronex, a typical fine particle carbon black, appears to give data in reasonable accord with practical experience while Aquadag, a suspension of graphite particles, tends to magnify some effects and therefore is more useful for specific tests. The influence of hard water and of other inorganic salts on suspending power data is discussed. The need for careful selection of type of soil and fabric and for careful interpretation of data is stressed. Graphs, tables, 21 refs.

SOILING PROCESS AND ANTISOILING AGENTS. E. Atlung. Tidsskr. Textiltek. 17, No. 9: 151-155 (1959). In Danish. Through BCIRA 39: 4562 (1959). (651)

The soiling process, the tendency of various fibers to soiling, and some methods for testing the soil binding tendency of textiles are discussed, and recently developed soil resistant finishes and their application are described.

STUDIES IN THE REACTION OF FORMALDEHYDE WITH CELLULOSE. K. V. Datye and G. M. Nabar (Univ. Bombay). (Letter to the editor). Textile Research J. 30: 72-73 (Jan. 1960). (652)

Results of a study on the behavior of cellulose towards formaldehyde under various conditions of treatment to elucidate the kinetics of reaction between cellulose and formaldehyde are presented. Table, 13 refs.

PROTEIN BASED DETERGENTS. H. L. Sanders and M. Nassau. Soap Chem. Specialties 36: 57-59, 122 (Jan. 1960). (653)

Properties and uses of the Maypons are discussed. In the textile industry, they are used as scouring agents, laundering detergents, rug shampoos, and softeners. Tables.

THEORY OF THE WASHING PROCESS. W. Kling and H. Lange (Henkel and Cie GmbH). J. Am. Oil Chemists Soc. 37: 30-32 (Jan. 1960). (654)

The soil usually occurring on the textiles to be washed may be subdivided into materials which are liquid at the washing temperature and others which are solid under the same conditions. The mechanism of removal of each type is considered theoretically. Graphs, 12 refs.

OPTICAL STUDIES. PART 1. RELATION OF COLOR TO THE APPARENT SOILABILITY OF TEXTILE MATERIALS. H. B. Mann and T. H. Morton (Courtaulds Ltd). J. Soc. Dyers Colourists 75: 522-533 (Nov. 1959). (655)

A study of soiled colored starch has indicated the possibility of relating the degree of apparent soiling to the physical concentration of soil and the reflectance spectrum of the original surface. It is possible to compute from the spectrum a characteristic empirical quantity, the SMR value, which ranks the colored material in order of relative apparent unsoilability in a series of materials, similar in structure but differing in color. The derivation of SMR values for colored starch involves no optical hypothesis, and the generalization to fibrous materials depends only on the essential optical similarities of the systems. Full practical details, with tabulated data, are given for the determination of SMR values of colored fibers. The conclusions are discussed with special reference to the behavior of carpets made from viscose rayon staple. Graphs, tables, 5 refs.

OPTICAL STUDIES. PART 2. SMR VALUES FOR A COMPREHENSIVE RANGE OF COLORS. H. B. Mann. J. Soc. Dyers Colourists 75: 534-536 (Nov. 1959). (656)

The SMR (soil resistance merit rating) values of a wide range of colors have been measured and the results listed. Two series of tests have been made. The dependence of SMR on depth of color and flattening is examined in detail. Reference to the listed values will enable any color to be assessed approximately in respect of the relative liability to show soiling. Tables, 3 refs.

CLASSIFICATION OF FINE STRUCTURAL CHARACTERISTICS IN CELLULOSE BY INFRARED SPECTROSCOPY: USE OF POTASSIUM BROMIDE PELLET TECHNIQUE. F. G. Hurtubise and H. Krässig (Industrial Cellulose Research Ltd). Anal. Chem. 32: 177-181 (Feb. 1960). (657)

The differences in the infrared spectra of cotton linters and unbleached sulfite birch and spruce pulps were examined as well as the spectral changes which occur when these cellulose samples are mercerized. Infrared spectroscopy can be used as the basis for a routine analytical method for classifying cellulose samples according to their fine structural characteristics. Graphs, tables, 19 refs.

SORPTION OF WATER BY NYLONS. H. W. Starkweather, Jr. (E. I. du Pont de Nemours & Co.). J. Appl. Polymer Sci. 2: 129-133 (Sept./Oct. 1959). (658)

The sorption isotherms of annealed films of nylons 66 and 610 at 23° C are well described by the Flory-Huggins equation at all humidities. The partial specific volume of water varies from 0.46 cc/g at 0% rh to more than 1.0 cc/g at 100% rh. The experimental partial molar heats of sorption are in good agreement with values calculated from the theory, provided allowance is made for the changes in volume on mixing. Graphs, tables, 20 refs.

SYNDETS AND SOAPS: I/EC ANNUAL REVIEW 1959. F. D. Snell. Ind. Eng. Chem. 52: 52A-54A (Jan. 1960). (659)

New developments during 1959 in synthetic detergents and soaps are reviewed.

EFFECT OF SOIL ON THE PHOTOCHEMICAL DEGRADATION OF COTTON. M. A. Morris and B. Wilsey (Univ. Calif.). Textile Research J. 29: 971-974 (Dec. 1959). (660)

In this study, cotton yarns were impregnated with an airborne soil, a ground soil, and a lignin derivative of the ground soil. The effect of these soils on the photochemical degradation of the cotton was determined. The airborne soil is considered to be typical of the soil accumulated by textiles during use. The ground soil chosen had a high organic content which would yield a high proportion of lignin derivative, and was classified as clay loam. Tables, 10 refs.

DENSITY, CRYSTALLINITY, AND HEPTANE INSOLUBILITY IN ISOTACTIC POLYPROPYLENE. R. G. Quynn, J. L. Riley, D. A. Young, and H. D. Noether (Celanese Corp.). J. Appl. Polymer Sci. 2: 166-173 (Sept./Oct. 1959). (661)

This paper deals with the development of a density method for estimating percentage crystallinity in polypropylene and with the correlation between crystallinity (by density) and heptane insolubility. The density method is compared with x-ray and infrared methods of crystallinity determination. A limited amount of work was done to assess the influence of molecular weight (as judged by the intrinsic viscosity) on crystallinity and solubility. Graphs, tables, 9 refs.

MOISTURE SORPTION OF THE SILK OF BOMBYX MORI IN RELATION TO THE PROPORTION AND CHEMICAL COMPOSITION OF THE CRYSTALLINE AND AMORPHOUS PHASES. F. Lucas and S. G. Smith (Shirley Inst.). J. Textile Inst. 50: T695-T700 (Dec. 1959). (662)

Recent quantitative determinations of the proportion and chemical composition of the crystalline and amorphous phases of silk fibroin have been used to calculate the distribution of sorbed water between these phases. Assuming specific values for the sorption by hydrophilic groups of the protein and complete availability of the amorphous phase, it is shown that approximately 30% of the water sorbed at 65% rh is held by the crystalline phase, probably on the surface of the crystallites. Tables, 12 refs.

DISPERSION OF WOOL PROTEIN BY THIOLS IN ACID SOLUTION. W. E. Savige (CSIRO Wool Research Labs., Australia). Textile Research J. 30: 1-10 (Jan. 1960). (663)

In this paper it is shown that acid solutions containing thiols can dissolve wool proteins, provided that salts are absent or present only in very low concentration. The extent of extraction depends on a number of other factors such as temperature, time, pH, and the nature or concentration of thiol, acid, and any salt or other reagent which may be present. Graphs, tables, 30 refs.

FACTORS INFLUENCING THE ROLE OF ADDITIVES DURING THE REGENERATION OF CELLULOSE FROM VISCOSE SOLUTIONS. M. Levine and R. H. Burroughs, Jr. (Industrial Rayon Corp.). J. Appl. Polymer Sci. 2: 192-197 (Sept./Oct. 1959). (664)

In this paper some of the factors involved in the mechanism of viscose additives are discussed. Graphs, tables, 14 refs.

ISOLATION OF AN HYDROXY ACID CONCENTRATE FROM WOOL WAX ACIDS. W. R. Noble, A. Eisner, and J. T. Scanlan (Eastern Reg. Research Lab.). J. Am. Oil Chemists Soc. 37: 14-16 (Jan. 1960). (665)

The fractionation of the methyl esters of wool wax acids by partitioning between two immiscible solvent layers is described. Graphs, 14 refs.

Physics G2

TESTS FOR COLOR VISION. F. Jordinson and T. Minshall (Coll. Technol., Huddersfield). J. Soc. Dyers Colourists 75: 585-593 (Dec. 1959). (666)

The various types and degrees of defective color vision are discussed, leading to many different kinds of tests, which may be valuable and successful for certain purposes but less so for others. Special tests are required for dyers and color blenders, where even a slight variation from normal color vision is quite an important matter. The Wain test, which has been developed on the basis of metameric matches, is claimed to be extremely sensitive for this purpose. Diagrs, graphs, tables, 16 refs.

UTILIZATION OF RADIOISOTOPES IN THE TEXTILE INDUSTRY. W. T. Rainey, Jr. Bobbin and Beaker 17: 7-8, 16-22 (Fall 1959). (667)

A review. 34 refs.

KINEMATICS OF A ROLLING TIRE AND ITS APPLICATION TO TIRE PERFORMANCE. M. Berger (Esso Research & Eng. Co.). J. Appl. Polymer Sci. 2: 174-180 (Sept./Oct. 1959). (668)

MISCELLANY H

PROCEEDINGS OF THE TEXTILE MARKET RESEARCH CONFERENCE, New York, New York. May 28-29, 1957. Nat. Cotton Coun. of America, Memphis, Tenn. 1957. 71 p. (669)

Tomorrow's markets: the economic outlook for the U.S., by W. Williams, p. 2-6; Case histories of market research at work: Part 1: Market research's role in developing and merchandising the Edsel, by J. E. Judge, p. 7-13; Part 2: Expanding markets for basic materials, by E. M. Strauss, Jr., p. 14-19; Organizing and operating a textile marketing research department, by W. E. Clark, p. 20-23; Determining consumer preferences and practices, by O. V. Wells, p. 24-27; Evaluating market potentials for new finishes, by J. Walsh, p. 28-31; Psychology of consumer acceptance, by D. M. K. Smith, p. 32-41; Market research program of the raw cotton industry: Part 1, by F. A. McCord, p. 42-48; Part 2, by M. K. Horne, Jr., p. 48-56; The challenge: how to sell more textiles, by H. C. Mills, p. 57-62; Market research: a guide to developing and merchandising textiles and textile products, p. 63-70; Concluding remarks, by F. E. Grier, p. 70-71.

1950-1960: TEN YEARS OF TEXTILES. W. R. Bell (Assoc. Cotton Textile Merchants, N. Y.). Textile Bull. 86: 36-39 (Jan. 1960). (670)

The annual survey of Assoc. Cotton Textile Merchants of New York reviews the changes in productivity and consumption of cotton textiles over the past 10 years.

TITLES OF COMPLETED THESES IN HOME ECONOMICS AND RELATED FIELDS IN COLLEGES AND UNIVERSITIES OF THE UNITED STATES, 1957-1958. U. S. Agri. Research Serv. in cooperation with the U. S. Office of Education. Wash. Dec. 1958. 41 p. PA-388. (671)

Theses on clothing and textiles are listed under the headings: Fibers and fabrics (Properties and qualities, Laundering and detergents) and Clothing and household textiles (Economics and management, Design and selection, Clothing construction).

THE ENGINEER AND TEXTILE DEVELOPMENT. W. Wynne-Owen (Brit. Nylon Spinners Ltd). Nylon Outlook 2, No. 6: 4-9 (Summer 1959). (672)

The engineer's role in textile development is discussed, citing as examples recent problems dealt with by engineers at British Nylon Spinners, e.g. beams for nylon yarn storage and tension control in running threads. Photos, diagrs.

RESEARCH FOR INDUSTRY: 1958. Gt. Brit. Dept. of Scientific and Industrial Research. London. 1959. 135 p. Available from Brit. Information Services, 30 Rockefeller Plaza, New York 20, N. Y. $1.08. (673)

A report on work done by the British industrial research associations which includes information on the cotton, felt, hosiery, jute, lace, laundering, linen, rayon, and wool research associations. New ideas, new products, new processes: how cooperative research serves the textile industry, p. 41-49.

NEW PLASTICS FOR THE DYEING AND BLEACHING INDUSTRY. R. W. Marks (ManMil Plastics Ltd). Dyer 122: 689-693 (Nov. 20, 1959). (674)

The physical properties and chemical resistance of polypropylene and polyvinyl chloride/Fiberglas reinforced plastics which make them suitable for interior building structures and pipes, tanks, hoods, and ducts are described.

HIGHLIGHTS OF THE PAST YEAR. P. J. Wood (Royce Chem. Co.). Am. Dyestuff Reptr. 48: 99-102 (Dec. 14, 1959). (675)

Developments in needle punching and shuttleless looms, impregnating, finishing, and washing machines, and laboratory instruments and apparatus are briefly reviewed. Photos, diagrs.

TEXTILE MARKETING IN THE 1960's. L. S. Liang. Modern Textiles Mag. 40: 61-63 (Dec. 1959). (676)

Following an analysis of trends in textile production and consumption and the structure of the textile industry, four critical marketing areas and their applicability to the textile industry are discussed: market planning, segmentation, organization, and research.

PRODUCER LOOKS AT MARKETING. C. E. Harrison (English Sewing Cotton Co. Ltd). Textile Weekly 59(2): 873-883 (Oct. 23, 1959). (677)

The type of organization best suited to an efficient production and marketing program is analyzed.

PATENT CHECKLIST

U.S. patents may be obtained from the U.S. Patent Office, Washington 25, D.C., for 25¢ a copy. Photostatic copies of foreign patents are also available. Charges for these photostats are based on the number of pages in the patent.

YARN PRODUCTION B

RING SPINNING MACHINE. W. H. Watson and S. L. Cole (to T. M. M. (Research) Ltd). BP 819 923, Sept. 9, 1959. Through BCIRA 39: 4180 (1959). (678)

In a single-sided ring frame for spinning carpet tuft yarns direct from sliver, to save space the drafting apparatus and a double row of spindles, in staggered arrangement, are located on the side of the frame remote from the sliver supply, which is placed at floor level, and the slivers are lifted up to an overhead path by which they descend gently to the drafting apparatus.

SPINNING MACHINE. W. H. Watson (to T. M. M. (Research) Ltd). BP 819 935, Sept. 9, 1959. Through BCIRA 39: 4181 (1959). (679)

To save space and ease the load on the operative with a sliver-to-yarn machine, the sliver is coiled in rectangular cans which are placed on the floor, and the sliver is fed upwardly through the drafting units to inverted spindles.

APPARATUS FOR THE CONTINUOUS ELECTRICAL HEAT TREATMENT OF RUNNING NYLON YARNS. Heberlein & Co. AG. BP 821 146, Sept. 30, 1959. Summary in BCIRA 39: 4359 (1959). (680)

STUFFER BOX CRIMPING. NV Onderzoekingsinst. Research. BP 821 179, Sept. 30, 1959. Through BCIRA 39: 4360 (1959). (681)

The thread is fed upwards by means of a pair of rollers into a cylindrical box lined with polytetrafluoroethylene and containing balls of such diameter that at least two of them at a time rest in the nip of the rollers, and of such a number that they entirely cover the wad of thread in the box. The pressure of the balls may be reinforced by a piston device. Hot air is admitted to the box on 2 sides of the thread.

PROCESS FOR INCREASING THE SURFACE FRICTION OF NYLON YARNS. Inventa AG. BP 821 266, Oct. 7, 1959. Through BCIRA 39: 4539 (1959). (682)

The yarns are treated with a dispersion of a fine-grained polyamide powder (finer than 40 μ) in a solution or emulsion of an adhesive, e.g. a copolyamide of dilinolenic acid and ethylenediamine in alcohol, an emulsion or solution of polyvinyl acetate, or a mixture of resorcinol and propionaldehyde.

FALSE TWIST CRIMPING MACHINE. H. H. Wormser (to Universal Winding Co.). USP 2 918 778, Dec. 29, 1959. (683)

Heater member designed to be equally adapted for either radiant or contact heating.

PREPARATION OF CRIMPED SLIVER FROM TOW. F. Kirby. BP 821 364, Oct. 7, 1959. Through BCIRA 39: 4492 (1959). (684)

The continuous tow is passed through the nips of 3 pairs of rollers. The bottom rollers are plain and heated. The top rollers have undulating surfaces over two-thirds of their length and cutting edges, inclined at an angle, over the remaining third. The cutting portion is over a different third on the different rollers. The cut and crimped sliver is intended to be fed to a Lister nip comb and thence to a Raper auto-leveler gill box.

APPARATUS FOR COLLECTING WASTE FIBROUS MATERIALS FROM TEXTILE MACHINERY. M. F. Gordon and W. S. H. McKee (to Linen Thread Co. Ltd). BP 821 422, Oct. 7, 1959. Through BCIRA 39: 4510 (1959). (685)

The waste (e.g. from a carding machine) is conveyed pneumatically to a cyclone separator that drops it on a device for compressing it into a manageable form.

STUFFER BOX CRIMPING APPARATUS. T. C. Spence and R. B. Funk (to Dow Chem. Co.). USP 2 917 784, Dec. 22, 1959. (686)

For acrylonitrile polymer tow in aquagel form.

CRIMPING HIGHLY CRYSTALLINE SYNTHETIC FIBERS AND FILAMENTS. L. F. Rokosz (to Dow Chem. Co.). USP 2 917 805, Dec. 22, 1959. (687)

Saran fibers are placed in relaxed condition on a heated, nonadherent surface to unilaterally, differentially amorphize them in cross-section. They are tensioned so as to preferentially elongate them in their more amorphous cross-sectional regions, stretched to cause orientation, and relaxed to produce the desired crimp.

CRIMPING ACRYLONITRILE AQUAGEL FIBER TOW. T. C. Spence, R. B. Funk, and H. N. Woessner (to Dow Chem. Co.). USP 2 917 806, Dec. 22, 1959. (688)

A closely controlled crimp-effecting force is applied to the aquagel fiber tow for an almost instantaneous period of time to impose a zig-zag crimp pattern to the fibers. The fibers are dried in a completely unrestrained condition to destroy the aquagel structure and heat set the crimp.

CRIMPING MACHINERY FOR PRODUCING YARNS WITH LATENT ELASTICITY. E. D. Bolinger and N. E. Klein (to Deering Milliken Research Corp.). USP 2 919 534, Jan. 5, 1960. (689)

The yarns are briefly contacted while under tension with a heated, sharp-edged blade and the resultant product is characterized by a slightly wavy appearance and lack of liveliness. Their latent elasticity, however, may be fully developed by a second heating, preferably after being woven or knitted.

Opening, picking, fiber preparation B1

WASTE SHAKERS. E. C. Barraclough (to Pneumatic Conveyors (Huddersfield) Ltd). BP 817 682, Aug. 6, 1959. Through BCIRA 39: 4173 (1959). (690)

A shaker for cleaning fiber consists of a conical cage (of grid bars) mounted on rollers with its axis of rotation horizontal, and a shaft carrying radial beater arms coupled to the cage for rotation in the opposite direction. Fiber is fed at the narrow end and collected at the wide end. Trash is collected from below the cage in a trough from which it is moved away by a worm conveyor.

LAP FORMING MACHINE. T. W. Owen and G. Dakin (to Brit. Cotton Ind. Research Assoc.). BP 821 041, Sept. 30, 1959. Through BCIRA 39: 4357 (1959). (691)

In the region midway between the beater and cages in pickers and opening machines, there is a region of large-scale turbulent air flow that is in favor of a coherent lap but militates against regularity; on the other hand, making the air flow entirely nonturbulent results in a weak lap. It is now proposed to insert in the critical region a roughly triangular baffle, so as to remove large-scale effects but retain small regions of turbulence.

Carding and combing B2

CARDING MACHINE. R. Taine and J. Pelissier (France). BP 817 805, Aug. 6, 1959. Through BCIRA 39: 4175 (1959). (692)

The illustration shows a set of 4 carding cylinders mounted for rotation at surface speeds of 1, 3, 12, and 10 km/hr. Between the 4 cylinders are mounted, above the center line, 3 sets of worker and clearer rollers, and below the center line 3 stripping rollers, the third having also a clearer roller. The fourth cylinder is engaged by a doffer rotating at 1 km/hr and this by a doffing comb. The machine is intended for all common types of natural and artificial fiber.

CARDING MACHINE. G. Schiaparelli. BP 818 651, Aug. 19, 1959. Through BCIRA 39: 4174 (1959). (693)

A carding engine of the type having pairs of worker and stripper rollers arranged about the main cylinder is fitted with a small toothed roller in the angle between the worker and stripper, rotating in the opposite direction to them and at higher speed, and a large roller having a plain or grooved surface or composed of strips of flexible material, and mounted above the teeth of the small roller and in contact with the teeth of the worker roller, for rotation in the opposite direction to the worker roller and at higher speed. The large roller stretches the fibers around the worker with their free ends towards the stripper.

COMBING MACHINES. W. E. Morton (to T. M. M. (Research) Ltd). BP 822 291, Oct. 21, 1959. Through BCIRA 39: 4512 (1959). (694)

A rectilinear comber is fitted with means by which a constant draft is imposed by the detaching rollers on the combed fringe during the period between the engagement of the foremost tips of the fringe fibers and the moment when the distance between the detaching rollers and the nippers has decreased and is within a predetermined angle of the cylinder-shaft revolution of its minimum value.

TOP COMB SUPPORT FOR NASMITH TYPE COMBER. W. Naegeli (to J. J. Rieter & Co. Ltd). USP 2 916 778, Dec. 15, 1959. (695)

The carrier for the top comb can be displaced on and fixed to an immovable guide relative to the bottom nipper, so that once the top comb has been adjusted it may be fixed by a single connection between the guide and carrier.

LARGE CAN SLIVER COILER. O. Richardson and C. W. Walter (to So. States Equip. Corp.). USP 2 916 780, Dec. 15, 1959. (696)

The can is mounted on rollers and has a platform for holding the can securely in place during coiling.

Drawing and roving B3

SLIVER DRAFTING APPARATUS. T. Kawabata (to Ishikawa Seisakusho KK). BP 819 707, Sept. 9, 1959. Through BCIRA 39: 4176 (1959). (697)

The sliver is confined and forwarded by a mechanism comprising 2 inner and 2 other slide pieces. The inner slides are so shaped and arranged that a groove is formed between them. The outer slides have each a projection that enters the groove and together provide a confining passage for the sliver. The 4 slides are reciprocated out of phase.

TOP DRAFTING ROLL SUPPORT AND WEIGHTING. SKF Kugellagerfabriken GmbH. BP 820 253, Sept. 16, 1959. Through BCIRA 39: 4178 (1959). (698)

The arm that carries the top rollers and weighting mechanism is pivoted and can be locked in the operative position to a fixed part of the machine. Flat, spiral springs are used as weighting means.

SLIVER DRAFTING. J. A. Matthew and J. L. Spencer-Smith (to Linen Ind. Research Assoc.). BP 821 023, Sept. 30, 1959. Through BCIRA 39: 4358 (1959). (699)

In order to vary the draft in accordance with the drafting force, a pneumatic gaging unit is used to measure the force in the sliver and transmit the signal continuously to a pneumatic transducer so as to alter the position of a guide and thereby vary the length of the sliver between the feed and drafting rollers.

HYDRAULIC WEIGHTING FOR TOP DRAFTING ROLLS. O. Steinmetz, W. Ulbricht, and E. Schafer (to VEB Spinnereimaschinenbau). BP 821 443, Oct. 7, 1959. Through BCIRA 39: 4514 (1959). (700)

The rollers are carried by a hollow arm containing fluid under adjustable pressure. Each roller is fitted with a piston that slides transversely through the hollow arm. The loading area of each piston can be varied to give the desired pressure on the roller spindle.

TOP DRAFTING ROLL CARRIER ARM. E. Dausch (to SKF Kugellagerfabriken GmbH). USP 2 917 786, Dec. 22, 1959. (701)

Bracket on which the carrier arm is mounted makes possible the automatic alignment of the top and bottom rolls regardless of the position of the bracket on the supporting bar.

TEXTILE FIBER DRAFTING MECHANISMS. J. Noguera (to Casablancas High Draft Co. Ltd). BP 822 357, Oct. 21, 1959. Through BCIRA 39: 4513 (1959). (702)

A drafting system is fitted with a front underclearer comprising a bracket arm that is pivoted to the roller stand on a transverse axis and has an upwardly spring-urged seating for an underclearer end pivot, whereby the clearer is lightly pressed against the bottom drafting roller.

ROVING FRAME FLYER. E. B. Robinson (to Ideal Mach. Shops). USP 2 919 535, Jan. 5, 1960. (703)

Reinforced construction for the legs of an inverted U-shaped flyer which limits the flexing of the flyer legs to a minimum during high speed operation.

Spinning, winding, twisting B4

SPINNING MULES. B. E. King, W. Haworth, and H. Bamford (to T. M. M. (Research) Ltd). BP 817 815, Aug. 6, 1959. (Addition to BP 732 665). Through BCIRA 39: 4182 (1959). (704)

The parent invention related to the use of electric circuits instead of gears and clutches to control the various functions in mule spinning. It is now proposed to use a selector switch arranged to be intermittently rotated under the control of switches operated by moving parts of the mule.

DOUBLE TWIST SPINDLE. Soc. des Mecaniques Verdol. BP 817 987, Aug. 12, 1959. Through BCIRA 39: 4185 (1959). (705)

Double twist spindle of the kind in which an auxiliary support for the supply yarn is mounted on the upper part of the spindle shaft and also on the upper part of an outer member rotating about the same shaft, employs a homokinetic joint between the shaft and the outer member.

FANCY YARN TWISTING MACHINES. E. Hamel (Germany). BP 819 185, Sept. 2, 1959. Through BCIRA 39: 4518 (1959). (706)

In a twisting frame for slub and other fancy yarns the speeds of the back rollers and of a reciprocating lifting or knop rail are varied at intervals by means of a cam-disc-operated switch for periods defined by a variable time relay that operates a further relay controlling the drive to the back rollers and lifting rail.

SPINNING SPINDLE. Presná Mechanika Nar. Pod. BP 819 991, Sept. 9, 1959. Through BCIRA 39: 4183 (1959). (707)

The lower, stationary part and the upper revolving part are fabricated from a light metal but the bearing surfaces are sprayed to a depth of 0.3-1 mm with iron or steel.

FALSE TWIST APPARATUS. E. Findlow (to E. Scragg & Sons Ltd). BP 821 460, Oct. 7, 1959. Through BCIRA 39: 4517 (1959). (708)

A false-twisting device comprises at least two movable surfaces (endless belts or flanges on spindles) between which the yarn is forwarded. The frictional contact imparts false twist.

TOP DRAFTING ROLL ASSEMBLY FOR SPINNING MACHINES. J. J. Rieter & Cie AG. BP 819 692, Sept. 9, 1959. Through BCIRA 39: 4179 (1959). (709)

The bearing unit is secured in a bore in the part that carries the roller cover by means of a split spring ring that has at least 3 internal protuberances for gripping the axle when the ring is pushed home. The special claim is that the roller assembly is easy to dismantle and put together when it is necessary to clean and lubricate the unit or grind the cover.

DRAFTING MECHANISM. SKF Kugellagerfabriken GmbH. BP 820 239, Sept. 16, 1959. Through BCIRA 39: 4177 (1959). (710)

In a double-apron drafting system having at least one pair of middle rollers, an apron cradle and apron guide bars all mounted between a pair of feed rollers and a pair of delivery rollers, the aprons run over and are driven by the feed rollers, and also run over the middle rollers and apron bars. The middle rollers can be adjusted to give a drafting nip or merely to control and guide the aprons.

SPINDLE DRIVE FOR SPINNING AND TWISTING MACHINES. Wuerttembürgische Spindelfabrik GmbH. BP 821 451, Oct. 7, 1959. Through BCIRA 39: 4516 (1959). (711)

Each spindle is driven from a common shaft by an individual belt that passes over a guide pulley and a drive pulley, close to the spindle, and an idler pulley adjacent to the drive pulley. All the driving members and the lower part of the spindle are enclosed in a casing.

CABLING MACHINES. J. P. Mackie (to J. Mackie & Sons Ltd). BP 821 682, Oct. 14, 1959. Through BCIRA 39: 4519 (1959). (712)

A vertical cabling machine has takeup and letoff flyers that rotate about vertical axes with the yarns being drawn from letoff bobbins and through a tubing die by means of haul pulleys that rotate around a takeup flyer. The letoff bobbins are so located that their lower edges lie above the lower edge of the takeup bobbin and beneath the haul pulleys.

TIRE CORD CABLING MACHINE. J. Woods and H. Schofield (to John Bright & Bros. Ltd). BP 822 333, Oct. 21, 1959. (Addition to BP 788 242). Through BCIRA 39: 4520 (1959). (713)

For greater convenience in mounting and doffing the supply packages, it is proposed to mount the spindles of the parent machine at 45° instead of vertically.

TEXTILE FIBER DRAFTING MECHANISMS. J. Noguera (to Casablancas High Draft Co. Ltd). BP 822 355, Oct. 21, 1959. Through BCIRA 39: 4513 (1959). (714)

To prevent damage to fiber during the changing of draft with a system that has a gear wheel in driving connection with the back bottom roller and a change-draft pinion for the driving gear wheel, the rotation of the bottom rollers when the change-draft pinion is disengaged is controlled by a pinion, mounted on a bracket, that can be moved from a nonoperative position to one in which it meshes with the gear wheel. The bracket also carries a pawl and ratchet device that operates, when the control pinion is in mesh, to prevent reverse rotation of the gear wheel and therefore of the bottom rollers.

SETTING ROLLERS IN SPINNING MACHINES. E. C. Thompson and E. T. Jagger (to George Angus & Co. Ltd). BP 822 352, Oct. 21, 1959. Through BCIRA 39: 4515 (1959). (715)

An instrument for finding the correct roller settings in a drafting system comprises a frame with adjustable cap nebs to take first, middle, and third roller sets (top, bottom, and idler rollers). It is mounted in place of normal cap nebs on one section of the drafting system so that the bottom rollers can drive the idler rollers.

DOUBLE APRON DRAFTING UNIT FOR SPINNING MACHINES. J. J. Keyser (to Schiess AG). USP 2 916 779, Dec. 15, 1959. (716)

The relative position, diameter, and number of the guide roller pairs may be changed so as to permit any variation in accordance with the type of fibers used.

DRAFTING APPARATUS FOR INSERTING FALSE TWIST IN ROVING PREPARATORY TO SPINNING. B. Cecchi (Italy). USP 2 916 870, Dec. 15, 1959. (717)

PLASTIC RING TRAVELER. H. G. Bowen (to U. S. Ring Traveler Co.). USP 2 918 780, Dec. 29, 1959. (718)

Self-lubricating travelers fabricated from 3,3-bis (chloromethyl) oxetane polymers are claimed.

BOBBIN HOLDER. A. E. Winslow. USP 2 919 079, Dec. 29, 1959. (719)

TWISTING SPINDLE. W. Bakker (to Am. Enka Corp.). USP 2 918 781, Dec. 29, 1959. (720)

Drive coupling between hollow thread supporting tube and spindle which is self-releasing when the spindle is stationary but provides a firm and positive drive when the spindle is rotated.

Yarns B5

PLASTIC REELS OR BOBBINS. J. R. Spencer and H. Hogg (to Textile Paper Tube Co.). BP 820 810, Sept. 30, 1959. Through BCIRA 39: 4383 (1959). (721)

A reel or bobbin is molded from polythene or other plastic with tapering, reinforcing walls between the outer barrel and the hub. In section the effect recalls a cut orange.

NYLON ROPE STRUCTURE. S. M. Murdock (to Columbian Rope Co.). USP 2 917 891, Dec. 22, 1959. (722)

Nylon yarns coated with liquid nylon solution are twisted with uncoated nylon yarns, and a number of these strands are then twisted into a rope.

TWISTING SARAN FILM STRIPS TO YARN. C. R. Faircloth (to Dow Chem. Co.). USP 2 918 784, Dec. 29, 1959. (723)

The flat, crystalline strips are heated at 120 to 145° C and immediately spirally Z- or S-twisted into a yarn-like monofilament product.

SEWING THREAD SPOOLS. English Sewing Cotton Co. Ltd. BP 821 441, Oct. 7, 1959. Through BCIRA 39: 4538 (1959). (724)

The claims are for a molded plastic (e.g. polystyrene) spool for sewing thread. It comprises a tubular core, external barrel and two flanges, with reinforcing ribs. The usual information as to count and the like is provided on disc labels that can be snapped home against shoulders on the ends of the core and barrel.

IMPROVED ADHESION OF TIRE CORD TO RUBBER. R. C. Waller (to Goodyear Tire & Rubber Co.). USP 2 917 422, Dec. 15, 1959. (725)

The cord is dipped in a relaxed condition in a dilute solution of bonding agent, compacted by increasing the tension, dipped in a second solution of bonding agent, and dried under the increased tension.

FABRIC PRODUCTION C

Warping, slashing, yarn preparation C1

AUTOMATIC REGULATION OF WARP SIZING. E. H. Jones and J. J. Vincent (to Brit. Cotton Ind. Research Assoc.). BP 817 838, Aug. 6, 1959. Through BCIRA 39: 4206 (1959). (726)

The invention relates particularly to a modification of the Shirley system of automatic control of warp sizing. In the original invention (BP 654 178) the stock size mixture was provided in liquid form. In BP 792 663 the liquid was replaced by a slurry in which the starch was held in suspension by an addition of sodium alginate. Both preparations of the stock size entailed weighing out ingredients. In the present invention this possible source of human error is avoided by automatically metering the solid size ingredients to a container in which the size is cooked.

MACHINE FOR FEEDING HEADED SHUTTLE BOBBINS AND FOR WEFT END REMOVAL. K. Moos (Switzerland). BP 817 973, Aug. 12, 1959. Through BCIRA 39: 4203 (1959). (727)

The invention relates to means for cutting trailing ends of weft from bobbins of the Northrop type so that the cleared bobbins may be led to a magazine or automatic machine. The machine comprises conveyors controlled by electromagnetic clutches and running at different speeds, bobbin detectors in the path of the bobbins coupled to switch means in feed circuits for the clutches so that the clutches are released when moved by accumulated bobbins, and scissor means at the delivery end of the conveyors for severing the trailing ends.

WINDING MACHINES. E. Brierley (to Thomas Holt Ltd). BP 819 662, Sept. 9, 1959. Through BCIRA 39: 4200 (1959). (728)

Means for moving a yarn package holder away from the driving shaft of a winding machine as the package builds up without applying undesirable pressure on the surface of the package. The package (mounted on a pivot or slide) is in rolling contact with a lightly loaded feeler wheel or roller that transmits motion to a toothed rack through a friction wheel and reduction gear. The rack moves the package as it builds up and progressively decreases the speeds of the spindle and traverse.

APPARATUS FOR WINDING SEVERAL THREADS ON ONE BOBBIN. Barmer Maschinenfabrik AG. BP 819 583, Sept. 9, 1959. Through BCIRA 39: 4202 (1959). (729)

Device for preventing overriding and entanglement when 2 or more threads are being wound on 1 bobbin comprises a thread guide that reciprocates immediately in front of the bobbin and generates a false twist of periodically changing direction.

YARN PACKAGE. H. Buddecke. BP 819 591, Sept. 9, 1959. Through BCIRA 39: 4205 (1959). (730)

The package, described as a yarn strip roll, comprises a spirally wound yarn strip consisting of oblong coiled windings arranged in overlapping scales held together, except at the loops, by a paper band or the like.

WINDING MACHINES. F. Holt and G. Lee (to Thomas Holt Ltd). BP 819 861, Sept. 9, 1959. Through BCIRA 39: 4201 (1959). (731)

The invention relates to winding machines in which the packages are driven by contact with a drum, and the speed of the cam driven traverse guide varies as the package grows. A compound gear driving connection is provided between the package spindle and the shaft of the traverse cam, so that the speed of the cam decreases as the package grows, and a constant ratio is maintained between the package speed and the reciprocations of the traverse guide.

YARN END CLAMPING DEVICE. L. Markoff-Moghadam. BP 819 890, Sept. 9, 1959. Through BCIRA 39: 4204 (1959). (732)

Spool for yarn or wire is fitted with a loose spindle and a wedging device for clamping the yarn end by pushing the spindle into the bore of the spool.

YARN TENSION CONTROL DEVICES. H. Stanier. BP 820 481, Sept. 23, 1959. (Addition to BP 795 800). Through BCIRA 39: 4381 (1959). (733)

The counterweighted lever or arm used in the parent invention to control the tension exerted by a disc tensioner is further applied to operate an electric stop motion.

WINDING ARRANGEMENT FOR SPINNING, TWISTING, AND WINDING MACHINES. Barmer Maschinenfabrik AG. BP 820 640, Sept. 23, 1959. Through BCIRA 39: 4382 (1959). (734)

Means for controlling the speed of a driving motor in accordance with fluctuations in yarn tension.

COP WINDING MACHINES. D. Delerue. BP 820 875, Sept. 30, 1959. Through BCIRA 39: 4379 (1959). (735)

A cop is wound in close formation with the aid of a rotating thread guide drum having a helicoidal guide edge with which the yarn is held in contact by means of a pulley mounted at the center of the drum on an antifriction bearing.

CONE WINDING SPINDLE. H. B. Miller (to Universal Winding Co.). USP 2 918 782, Dec. 29, 1959. (736)

CONE WINDING MACHINES. F. Holt and G. Lee (to Thomas Holt Ltd). BP 821 042, Sept. 30, 1959. Through BCIRA 39: 4380 (1959). (737)

In a cone winder of the traveling spindle type where winding is by contact with a length of roller shaft, it is proposed to turn the shaft down at intervals so as to provide a series of driving bands or collars separated by cylindrical stretches of reduced diameter. The device is claimed to reduce cobwebbing (ends falling over the nose or base of the cone), hard ends, and underfeeding (broken ends passing out on to the floor).

YARN METERING MECHANISM FOR WINDING. Vereinigte Glanzstoff Fabriken AG. BP 821 449, Oct. 7, 1959. Through BCIRA 39: 4535 (1959). (738)

To produce packages with a predetermined length of yarn, the yarn is guided (before binding) over a metering roller connected to a revolution counter driven by a squirrel-cage induction motor through a slipping clutch so that the counter is not affected by fluctuations of speed in the metering roller, and the yarn rides over this roller without slip.

REGULATING YARN TENSION IN TWISTING AND WINDING FRAMES. Vereinigte Glanzstoff Fabriken AG. BP 821 454, Oct. 7, 1959. Through BCIRA 39: 4536 (1959). (739)

The device comprises 2 adjustable grid brakes in each of which rows of bars extend in V-formation. The brakes are arranged one after the other, and staggered, in the path of the yarn, and an adjustable spring-loaded guide between the brakes changes the position of the yarn within the brakes in response to variations in input tension between predetermined limits.

CONTINUOUS HIGH SPEED WINDING MACHINE. I. Marshall (to Imp. Chem. Inds. Ltd). BP 822 329, Oct. 21, 1959. Through BCIRA 39: 4534 (1959). (740)

An apparatus for the continuous high speed winding of monofilament, yarn or tow has at least two carriers driven by frictional contact with a roller, either direct or via the material on the carrier, and an arrangement whereby a full carrier is automatically displaced by an empty one, the material being severed at the same time.

BENZINE-SOLUBLE SIZING AGENTS FOR RAYON. H. Bartl and H. Gensel (to Farbenfabriken Bayer AG). USP 2 917 478, Dec. 15, 1959. (741)

The filaments are treated with a benzine solution of a copolymer produced from acid esters of α,β-ethylene dicarboxylic acids and alcohols containing more than 8 carbon atoms and copolymerizable vinyl compounds.

VARIABLE SPEED CONTROL FOR WEFT WINDING MACHINES. J. R. Long (to Shuford Mills). USP 2 918 779, Dec. 29, 1959. (742)

Means controlled by the traversing mechanism or builder motion for gradually increasing machine speed during each downward stroke of the ring rail and for gradually decreasing machine speed during each upward stroke of the ring rail during a filling wind.

Weaving C2

ADJUSTABLE BREAST BEAM COVER FOR LOOMS. E. D. West. USP 2 918 943, Dec. 29, 1959. (743)

PREVENTING TRAILING-IN OF WEFTS IN CHANGE BOX LOOMS. J. I. Dukes. BP 819 589, Sept. 9, 1959. Through BCIRA 39: 4211 (1959). (744)

Devices for holding the weft from the shuttles that happen to be out of action are operated by a slotted rotary disc driven in synchronism with the shuttle change mechanism, so that the inoperative wefts are retained in the slots.

SELVAGE FORMATION IN SHUTTLELESS LOOMS. V. M. J. Ancet and M. Fayolle. BP 819 705, Sept. 9, 1959. Through BCIRA 39: 4208 (1959). (745)

In order to form a selvage it is common practice to fold the projecting end of weft back into the warp shed by means of a hook carried by an oscillating arm. To ensure catching of the weft when this is rather springy it is now proposed to rotate the hook on its arm when this is at the end of its stroke so as to wind the weft end on the hook.

PICKER STICK CHECK. Metapic SA. BP 819 934, Sept. 9, 1959. Through BCIRA 39: 4210 (1959). (746)

The shock is absorbed by a series of slabs of leather, bolted together at the ends but separate towards the center, the spacing apart being adjustable by tightening the nuts on the bolts.

SELVAGE FORMATION IN SHUTTLELESS LOOMS. E. Newmann (to VEB Webstuhlbau Neugersdorf). BP 819 968, Sept. 9, 1959. Through BCIRA 39: 4209 (1959). (747)

A loom, in which the weft is carried halfway by a weft inserter and then taken by a hook from the other side, is fitted with a slotted guide member mounted on a flexible rod at each edge of the fabric to pinch together the marginal warp ends behind the fell. Each guide is moved from its operative position (in which the ends are pinched together) to its inoperative position by means of the reed during beatup and is restored to the operative position by virtue of the resilience of the mounting rod.

ROTATING SHUTTLELESS LOOM. Developpement Textile SA. BP 819 974, Sept. 9, 1959. Through BCIRA 39: 4207 (1959). (748)

The loom comprises a rotating body composed of a linked assembly of polygonal, notched, warp-supporting plates alternating with circular, notched separator plates, the 2 sets of notches being inclined but aligned so as to provide longitudinal grooves for the insertion of weft by needle devices.

WEAVING TUBULAR FABRICS. P. L. Davenport (to P. Davenport Ltd). BP 820 014, Sept. 16, 1959. Through BCIRA 39: 4213 (1959). (749)

Tubular fabric that can bend without kinking (for surgical purposes and fire hose) comprises a helix of weft yarn of monofilament nylon or other manmade fiber, separated by a second helix of finer weft yarn, both bound together by warp yarns. The fabric is woven on a sequence of 4 picks.

THREADING MEANS FOR SHUTTLES WITH AUTOMATIC EJECTION OF THE COP RESIDUE. H. Held and C. Wagner. BP 821 008, Sept. 30, 1959. Summary in BCIRA 39: 4385 (1959). (750)

THREADING DEVICE FOR LOOM SHUTTLES. E. Mathers (to T. C. Keay Ltd). BP 821 160, Sept. 30, 1959. Summary in BCIRA 39: 4384 (1959). (751)

SHUTTLE STOP MOTION WITH SPRING LOADED BUFFER. Metapic SA. BP 822 371, Oct. 21, 1959. Through BCIRA 39: 4540 (1959). (752)

A fast reed loom is adapted for weaving at high speeds by fitting it with a shuttle-checking buffer that comprises a helicoidal spring and front and back stop elements adjustably arranged on a common spindle inside a hollow body.

LOOM SWEEP STICK. S. Baram. USP 2 917 086, Dec. 15, 1959. (753)

Replaceable bearing part for connecting the sweep stick with the stud of the picking arm.

WARP YARN TENSION DEVICE FOR SELVAGE FORMATION IN SHUTTLELESS LOOMS. M. Paabo (Sweden). USP 2 918 092, Dec. 22, 1959. (754)

SELVAGE FORMING DEVICE FOR SHUTTLELESS LOOMS. A. Schiappa (to Moore Fabrics Inc.). USP 2 918 093, Dec. 22, 1959. (755)

FILLING BOBBIN ADAPTED TO DETECT IMPENDING THREAD EXHAUSTION. E. Redaelli (Italy). USP 2 918 225, Dec. 22, 1959. (756)

The bobbin consists of two parts which will move apart when the convolutions of thread wound on the bobbin have been reduced below a predetermined number.

WEAVING HIGH PILE CARPET ON AXMINSTER LOOMS. O. J. Park and B. U. Cotner (to Magee Carpet Co.). USP 2 918 944, Dec. 29, 1959. (757)

The loom is modified by providing tube frames with extra long length tubes for holding the pile yarns, increasing the height of the toothed comb, and raising the cutting knives. The motion of the tube frame is varied to produce a double drawoff action instead of a continuous one.

SELVAGE FORMATION ON LOOMS WITH STATIONARY OUTSIDE WEFT SUPPLY. K. J. Hall (to Crompton & Knowles Corp.). USP 2 918 945 and 2 918 949, Dec. 29, 1959. (758)

The selvage is formed from a pair of crossing warp threads and a pair of noncrossing warp threads which are interwoven with the weft threads by passing the crossing warps between the noncrossing warps to cause bending of the weft around the warps.

WEFT YARN FEELER FOR GRIPPER SHUTTLE LOOM. E. Pfarrwaller (to Sulzer Freres SA). USP 2 918 946, Dec. 29, 1959. (759)

MULTIPLE BOX LOOM. J. R. Brandon (to Burlington Inds.). USP 2 919 723, Jan. 5, 1960. (760)

Blower means for directing an air jet between the selvage and shuttle box to prevent loose weft yarns trailing from inactive shuttles from being drawn in by the active shuttle.

WEFT FEELER FOR NARROW FABRIC LOOM. A. Cederlund and K. J. Hall (to Crompton & Knowles Corp.). USP 2 918 947, Dec. 29, 1959. (761)

A pivotal rigid weft feeler is guided and supported on the bow of the shuttle to permit only lateral movement of the feeler by the weft from a central normal or loom knockoff position to an abnormal nonstopping position when the weft is intact.

SHUTTLE PIRN HOLDING DEVICE. W. Holt (England). USP 2 918 948, Dec. 29, 1959. (762)

Means for firmly securing the stirrup in which the pirn is mounted.

STIRRUP FOR ATTACHING THE HARNESS LEVER OF A LOOM TO THE HARNESS WIRE. R. L. Alford. USP 2 919 722, Jan. 5, 1960. (763)

Knitting C3

APPARATUS FOR DETECTING AND MEASURING FAULTS IN KNITTED FABRICS. R. S. Gilchrist and D. A. E. Mattingly (to Klinger Mfg. Co. Ltd). BP 820 799, Sept. 23, 1959. Through BCIRA 39: 4436 (1959). (764)

The apparatus comprises means for locating spaced courses of loops in parallel and fixed relationship, means for applying equal stretch to the wales or chains of loops between the held courses, and means for comparing the tensions in the stretched wales or chains. This is a sensitive device that traverses the stretched fabric and can be made to give a tension trace on a record chart.

CIRCULAR KNITTING MACHINES. C. H. Wainwright (to Bentley Eng. Co.). USP 2 916 898, Dec. 15, 1959. (765)

Arrangement for mounting the bearing plate of a rotary assembly consisting of a needle bed or cam system in an opposed needle cylinder type machine.

SELVAGE DRAWOFF MEANS FOR FLAT KNITTING MACHINE. C. A. Hepp and P. J. Schoenster (to Alfred Hofmann & Co.). USP 2 916 899, Dec. 15, 1959. (766)

CIRCULAR HOSIERY MACHINE FOR ARGYLE PATTERNED HOSIERY. N. Levin (to Textile Mach. Works). USP 2 917 912, Dec. 22, 1959. (767)

Method of incorporating an overplaid design on a four feed machine in which one pair of feeds knits a pair of fabric sections and the opposite pair incorporates the overplaid design in the sections during their knitting.

STRAIGHT BAR KNITTING APPARATUS FOR SELECTIVELY KNITTING IN PLAIN OR RIB FASHION. M. Philip. USP 2 918 810, Dec. 29, 1959. (768)

Alternate needles are mounted on two separate bars and the needles on one of these bars are bent to mesh with the needles of the other bar so that the two bars can be tied together to produce plain knit or rotated to oppose each other to produce rib knit.

FALL BAR ADJUSTMENT IN COTTON'S PATENT AND OTHER STRAIGHT BAR KNITTING MACHINES. G. E. Stokes (to English Rose Ltd). USP 2 917 913, Dec. 22, 1959. (769)

KNITTING MACHINE YARN FEED. A. Shortland (England). USP 2 917 914, Dec. 22, 1959. (770)

Rotary yarn feeding drum which is readily adjustable to the speed of the knitting machine and capable of simultaneously feeding several yarns to separate feeders.

KNITTING ARGYLE PATTERNS ON CIRCULAR HOSIERY MACHINES. N. Levin (to Textile Mach. Works). USP 2 919 565, Jan. 5, 1960. (771)

Method of knitting an Argyle pattern on a four feed machine in which the design is formed by a plurality of overplaid yarns without walewise floats.

AIR CLEANER FOR MULTIFEED CIRCULAR KNITTING MACHINE. M. H. Felker (to Scott & Williams Inc.). USP 2 919 566, Jan. 5, 1960. (772)

RIBBED KNIT FABRIC CONSTRUCTION. R. P. Loeper (to Textile Mach. Works). USP 2 919 567, Jan. 5, 1960. (773)

Full-fashioned sweater with integrally knit ribbed bands of inelastic yarn having a rubber yarn inserted in spaced courses to augment their elasticity.

Fabrics C4

MECHANISM FOR INSERTING TUFTS IN PILE CARPETS. R. Barclay (to A. F. Stoddard & Co. Ltd). BP 817 340, July 29, 1959. Through BCIRA 39: 4064 (1959). (774)

The tuft yarn is fed to a set of nippers arranged around a rotary carrier that brings the nippers step by step to yarn feeding and yarn releasing stations by means of cam-actuated bevel gearing. The tufts are severed from the feed yarn at the feeding station.

PLASTIC BINDING FOR FABRIC EDGES. G. Ader and J. H. Hartley (to Microcell Ltd). BP 817 603, Aug. 6, 1959. Through BCIRA 39: 4215 (1959). (775)

A polyvinyl chloride plastisol is applied to the edges and hardened by high frequency electrical heating.

METHOD OF CARPET MANUFACTURE. P. Couquet (France). BP 821 196, Sept. 30, 1959. Through BCIRA 39: 4387 (1959). (776)

A warp of pile threads is pleated, the ends of the pleats are embedded in two parallel layers of a viscous monomer, the layers are hardened by polymerization, and the looped pile is cut along a plane parallel to the layers to form two webs of pile carpet.

CLOTHING MADE FROM PILE FABRICS. A. Morris (to Can. Min. Nat. Defence). BP 821 447, Oct. 7, 1959. (Addition to BP 682 111). Through BCIRA 39: 4543 (1959). (777)

Lightweight, cold weather clothing is made from a woven pile fabric.

YARN SUPPLY CONTROL FOR FISH NET MAKING MACHINES. A. S. Nibrilon (Norway). BP 821 018, Sept. 30, 1959. Summary in BCIRA 39: 4386 (1959). (778)

ABSORBENT, NON-FLEECY COTTON FABRIC. Tissage Leonard Maere SA. BP 821 485, Oct. 7, 1959. Through BCIRA 39: 4541 (1959). (779)

Absorbent fabrics for towels and kitchen cloths are woven in 2 distinct weaves giving a matelassé effect with regions of slack texture against a background that provides strength. The yarns are spun from uniform cotton of more than 1 in. staple, e.g. to 7s count with 9-12 turns per in. The absorbency is enhanced by a treatment with hydrochloric acid and sodium bisulfite.

PILE CUTTING LOOP FORMER FOR WARP KNITTING OF CUT PILE CARPETS. R. S. MacCaffray, Jr. (to C. H. Masland & Sons). USP 2 907 193, Oct. 6, 1959. (780)

Apparatus for holding the fabric being knitted against the fabric engaging surfaces of the trick plate by the heels of the cutting plush points, so that the fabric does not move forward and damage the needles as they advance.

APPARATUS FOR PRODUCING NONWOVEN GLASS FIBER MATS. J. A. Waugh (to Owens-Corning Fiberglas Corp.). USP 2 909 827, Oct. 27, 1959. (781)

Apparatus employing a fluid jet for removing glass strands from a rotary pulling wheel in the form of an opened, fiberized strand so that it may be directly deposited into a blanket-like mass for producing nonwoven mats.

MINIMIZED DRAG TOW TARGET CONSTRUCTION. E. Frey (to Massillon-Cleveland-Akron Sign Co.). USP 2 910 096, Oct. 27, 1959. (782)

The target is made up of side by side seam-connected flexible open-mesh panels, each panel containing laterally spaced monofilament warp strands and longitudinally spaced monofilament and multifilament weft strands continuously woven with the warp strands.

GLASS FIBER REINFORCED LAMINATES. F. B. Hauserman (to E. I. du Pont de Nemours & Co.). USP 2 910 378, Oct. 27, 1959. (783)

Treatment of glass fibers with Werner type chrome complexes improves adhesion between the resins or plastics and the glass fibers.

TUFTED FABRIC WITH BIAS FABRIC BACKING. A. U. Priester, Jr. (to Callaway Mills Co.). USP 2 910 762, Nov. 3, 1959. (784)

Fabric capable of being stretched in any direction in order to conform neatly to irregular contours such as furniture or automobile floors.

APPARATUS FOR PRODUCING NONWOVEN FABRICS. A. L. Thomas, Jr. and S. Oglesby, Jr. (to So. Research Inst.). USP 2 917 787, Dec. 22, 1959. (785)

A stream of airborne fibers is passed through an elongated electrostatic field of sufficient potential to cause the fibers to assume a parallel relationship to each other. They are then withdrawn in sheet form.

NONWOVEN FABRIC. R. E. Wolfrom (to Rohm & Haas Co.). USP 2 915 418, Dec. 1, 1959. (786)

The bonding agent consists of an aqueous dispersion containing 0.1 to 20% of a polyester-aminoplast condensate.

COTTON WARP AND TWISTED CELLOPHANE WEFT WOVEN PLACE MAT WITH CLOSED FABRIC END. J. S. Caputa and P. J. Kask. USP 2 916 798, Dec. 15, 1959. (787)

NONWOVEN FABRIC IMPREGNATED WITH A FOAMED PLASTIC. N. G. Gaylord (to E. I. du Pont de Nemours & Co.). USP 2 917 405, Dec. 15, 1959. (788)

The mat is impregnated with a plasticized polyvinyl chloride resin containing a blowing agent, heated to blow the resin, and compressed.

BONDED FLEECE LAMINATED CUSHIONING INSOLE. W. M. Scholl. USP 2 917 807, Dec. 22, 1959. (789)

The insole is composed of a porous fabric carrying a thick layer of fleece fibers on one face and a foam latex layer cured directly to the other face so as to lock the fleece fibers in position.

NONWOVEN TEXTILE WEBS. E. Bobkowicz (Canada). USP 2 919 217, Dec. 29, 1959. (790)

A web having the appearance and characteristics of conventional woven fabrics is produced by bonding together fibers assembled in the form of warp and weft layers by a heat-activated bonding agent.

SELF-LUBRICATING, LOW FRICTION BEARING MATERIALS. W. V. Smith. USP 2 919 219, Dec. 29, 1959. (791)

Fabrics containing Teflon yarns are arranged in layers so that the Teflon yarns in adjacent layers are diagonally spaced, the layers are bonded, and the product machined at right angles to the direction of the Teflon yarns.

FINISHING D

WASHING OR DYEING MACHINE FOR WASHING OR DYEING LOOSE FIBERS. H. Fleissner and G. Fleissner (Germany). BP 821 327, Oct. 7, 1959. Through BCIRA 39: 4571 (1959). (792)

A machine for washing or dyeing loose fiber and heavy products that cannot withstand a pull has a horizontal, perforated drum rotating in the liquid to which the fiber is fed on a conveyor belt. Reduced pressure is maintained within the drum so that the fiber is held to its surface and conveyed through the bath to a device that strips it off the drum and deposits it on another conveyor belt.

Chemical processes D1

PREPARATION OF POLYALKYLENE/POLYAMINE CONDENSATION PRODUCTS FOR ANTISTATIC AGENTS ON RAYON FABRICS. Boehme Fettchemie GmbH. BP 821 082, Sept. 30, 1959. Summary in BCIRA 39: 4413 (1959). (793)

APPARATUS FOR THE TREATMENT OF FABRICS WITH GASES, VAPORS, OR LIQUIDS. P. F. Van Vlissingen & Co.'s Katoenfabrieken NV. BP 816 703, July 15, 1959. Through BCIRA 39: 3900 (1959). (794)

The fabric proceeds through the apparatus by a zig-zag path around lower rollers on fixed axes and upper, driven rollers the surface speed of which decreases or increases progressively from the entrance to the exit. The rollers may be of the same diameter but driven at different speeds or of graduated diameters and driven at the same speed.

BLEACHING AND DISINFECTING COMPOSITIONS. R. C. Ferris (to Purex Corp. Ltd). BP 816 882, July 22, 1959. Through BCIRA 39: 4103 (1959). (795)

Dichloro- and trichloro-cyanuric acids yield active chlorine when dissolved in water but they are rather lachrymatory. This drawback to their use as domestic bleaches is overcome by blending them with a salt mixture (sodium chloride, sulfate, or phosphate) containing a sodium silicate of the Metso type.

CHLORITE BLEACHING OF LINEN. F. R. W. Sloan and W. H. Magee (to Bleachers' Assoc. Ltd). BP 819 637, Sept. 9, 1959. Through BCIRA 39: 4243 (1959). (796)

Linen fabric (also jute and hemp) is given a lime boil and treated with a solution of an alkali chlorite (at least 10 g/l) at pH below 7 and a temperature above 60° C.

NONPILLING TREATMENT. S. L. Anderson (to Wool Inds. Research Assoc.). BP 819 747, Sept. 9, 1959. Through BCIRA 39: 4246 (1959). (797)

One face of the fabric or garment is lightly impregnated with a butadiene or butadiene/acrylonitrile latex.

CAUSTIC TREATMENT OF POLYESTER FABRICS. Heberlein & Co. AG. BP 818 121, Aug. 12, 1959. Through BCIRA 39: 4248 (1959). (798)

Treatments of fabrics containing Terylene type fibers with caustic alkali can be run continuously if a swelling agent (methyl or butyl alcohol, glycol or glycol monomethyl ether) is added to the alkali.

ORGANIC MERCURY QUATERNARY AMMONIUM SALTS FOR ROTPROOFING OF TEXTILES. Nagase Sangyo KK. BP 820 440, Sept. 23, 1959. Summary in BCIRA 39: 4417 (1959). (799)

HARDENABLE, BASIC, SILICONE-CONTAINING, CONDENSATION PRODUCTS FOR TEXTILE WATERPROOFING AND DRESSING AGENTS. Chemische Fabrik Pfersee GmbH. BP 820 529, Sept. 23, 1959. Summary in BCIRA 39: 4416 (1959). (800)

FIXING AMINOPLASTS ON CELLULOSE-CONTAINING MATERIALS. Ciba Ltd. BP 820 946, Sept. 30, 1959. (Addition to BP 745 638). Through BCIRA 39: 4414 (1959). (801)

The fixation of an aminoplast (e.g. melamine/formaldehyde) on a cellulosic material is effected in an atmosphere of saturated steam at 110-120° C as sole source of heat.

BLEACHING AGENT. F. R. W. Sloan (to Bleachers' Assoc. Ltd). BP 821 168, Sept. 30, 1959. Through BCIRA 39: 4408 (1959). (802)

The agent is a solution containing sodium chlorite and an alkylene glycol polyester having free carboxyl groups, e.g. triethylene glycol succinate polyester.

OXADIAZOLE BRIGHTENING COMPOUNDS. Ciba Ltd. BP 821 843, Oct. 14, 1959. Through BCIRA 39: 4570 (1959). (803)

Eleven examples are given of the manufacture of fluorescent brightening agents containing oxadiazole and triazole ring systems created, in the course of the reactions, by appropriate ring closures.

FIELD TREATMENT FOR MAKING CELLULOSIC FABRICS FLAMEPROOF AND RESISTANT TO CHEMICAL WARFARE GASES. E. Klein and J. W. Weaver (to U.S. Secy. Army). USP 2 911 322, Nov. 3, 1959. (804)

The fabric is impregnated with a solution of tetrakis (hydroxymethyl) phosphonium chloride, a methylol melamine, and ammonium hydroxide (to flameproof), air dried, and then impregnated with an aqueous suspension of a vinyl-crotonic acid copolymer and activated carbon to make it resistant to chemical warfare gases.

CREASEPROOFING CELLULOSIC FABRICS. M. D. Haney, Jr. and L. Ambruster (to E. I. du Pont de Nemours & Co.). USP 2 911 326, Nov. 3, 1959. (805)

The bleaching sensitivity of fabrics treated with dimethylol-di(methoxymethyl)urea is overcome by padding the fabric in the presence of zinc nitrate, curing at 300 to 350° F, and scouring with a mildly alkaline solution.

APPARATUS FOR COATING GLASS FIBER STRANDS. A. L. Sokal (to L. O. F. Glass Fibers Co.). USP 2 911 941, Nov. 10, 1959. (806)

TREATMENT BEAM FOR WET PROCESSING OF FABRICS. M. N. Carroll and W. M. Kennedy (to Celanese Corp.). USP 2 912 298, Nov. 10, 1959. (807)

VAPOR METALIZING TEXTILES TO PROVIDE OPTICAL EFFECTS. E. Weiss (to Heberlein Patent Corp.). USP 2 912 345, Nov. 10, 1959. (808)

Vaporized metal is deposited on the surface of an embossed fabric at an inclination sufficient to metalize only part of the embossed elevations in order to produce contrasting optical effects.

WATER REPELLENT COMPOSITION. E. B. Michaels (to Stamford Chem. Co.). USP 2 913 427, Nov. 17, 1959. (809)

Copolymers of an unsaturated olefin containing a basic nitrogen atom and an oleophilic monomer.

WOOL SHRINKPROOFING. R. E. Wolfrom (to Rohm & Haas Co.). USP 2 915 419, Dec. 1, 1959. (810)

The fabric is impregnated with an aqueous dispersion of a polyester-aminoplast condensate and heated at 212 to 700° F, preferably from 240 to about 310° F.

PEROXIDE BLEACHING OF KERATIN FIBERS. M. Harris and A. E. Brown (to Harris Research Labs.). USP 2 914 374, Nov. 24, 1959. (811)

The keratin fibers are first treated at elevated temperatures with an aqueous solution containing free formaldehyde and a ferrous salt and thereafter with hydrogen peroxide in the presence of a stabilizing agent.

CONTINUOUS PRODUCTION OF METAL COATED GLASS FIBERS. R. G. Russell (to Owens-Corning Fiberglas Corp.). USP 2 916 347, Dec. 8, 1959. (812)

FLUORINE COMPOUNDS FOR RENDERING TEXTILES OIL REPELLENT. L. Q. Green (to E. I. du Pont de Nemours & Co.). USP 2 917 409, Dec. 15, 1959. (813)

POLYGLYCOL-POLYACID ESTER TREATMENT OF TEXTILES FOR IMPROVED ABRASION RESISTANCE AND TEAR STRENGTH. E. A. Vitalis (to Am. Cyanamid Co.). USP 2 917 410, Dec. 15, 1959. (814)

CREASE AND SHRINK RESISTANT CELLULOSIC FABRICS. B. H. Kress (to Quaker Chem. Prods. Corp.). USP 2 917 411, Dec. 15, 1959. (815)

Methylolated condensation products from 2-hydroxyethylamine, urea, and formaldehyde impart crease recovery and dimensional control without chlorine retention in subsequent washing.

PRODUCTION OF CELLULOSIC TEXTILES WITH PERMANENT CREASES AND IMPROVED SOIL AND ABRASION RESISTANCE. R. M. Reinhardt, L. W. Mazzeno, Jr., and J. D. Reid (to U. S. Secy. Agri.). USP 2 917 412, Dec. 15, 1959. (816)

The fabric is impregnated with an aqueous emulsion containing a dimethylol cyclic ethylene urea, polyethylene, a latent curing agent, and an emulsifying agent and cured to insolubilize the ethylene urea.

Dyeing and printing D2

APPARATUS FOR DYEING OF FABRIC. B. Thies Specialmaschinenfabrik KG. BP 816 546, July 15, 1959. Through BCIRA 39: 3898 (1959). (817)

The fabric is suspended in festoons in a closed dyeing vessel and sprayed from above with the dye liquor at a temperature of at least 140° C. Liquor that collects below the festoons is recirculated.

ULTRAVIOLET LIGHT ABSORBING CHEMICALS. Ciba Ltd. BP 816 750, July 15, 1959. Through BCIRA 39: 3910 (1959). (818)

Certain 1:3:4-oxadiazole or 1:3:4-thiadiazole compounds are claimed to absorb ultraviolet radiation and emit at most a faint blue fluorescence. The preparation of the compounds is the main feature of the examples, but reference is made to the production of cellulose acetate and polyvinyl chloride films that are opaque to ultraviolet radiation.

DYEING CELLULOSE WITH COPPER PHTHALOCYANINE DYES. I. D. Rattee, I. Seltzer, W. E. Stephen, and C. D. Weston (to Imp. Chem. Inds. Ltd). BP 816 925, July 22, 1959. Through BCIRA 39: 4082 (1959). (819)

DYEING MACHINERY. Rydboholms AB. BP 817 134, July 22, 1959. (Addition to BP 704 972). Through BCIRA 39: 4081 (1959). (820)

The material is impregnated in open width with the dye liquor, rolled upon a core, and rotated in an atmosphere of saturated air or superheated steam until the dye is evenly distributed and fixed. The wall of the vessel is electrically heated to prevent condensation.

DYEING CELLULOSE. I. D. Rattee, I. Seltzer, W. E. Stephen, and C. D. Weston (to Imp. Chem. Inds. Ltd). BP 819 585, Sept. 9, 1959. (Addition to BP 797 946). Through BCIRA 39: 4244 (1959). (821)

The parent invention claimed the application of certain triazinylamino azo dyes by impregnating the cellulosic material with the dye and then with an acid binding agent (e.g. caustic soda). Treatment in the reverse order is now claimed.

DYEING CELLULOSE WITH AZO DYES. I. D. Rattee, I. Seltzer, W. E. Stephen, and C. D. Weston (to Imp. Chem. Inds. Ltd). BP 820 470, Sept. 23, 1959. Through BCIRA 39: 4410 (1959). (822)

The fabric is padded through an aqueous solution containing the dye and an acid-binding agent.

WINDING MECHANISM FOR DYE JIG. E. F. Rotter and R. Augsten (to Gebr. Poensgen GmbH). BP 820 501, Sept. 23, 1959. Through BCIRA 39: 4409 (1959). (823)

Means for winding a length of fabric, at constant tension and linear speed, from one drum or reel to another in jig dyeing.

MANUFACTURE OF COLORED POLYAMIDE AND POLYESTER FIBERS. H. J. Twitchett and A. S. Wild (to Imp. Chem. Inds. Ltd). BP 820 975, Sept. 30, 1959. Through BCIRA 39: 4412 (1959). (824)

A very fine dispersion of a phthalocyanine in a polyamide is added to the chips of polyamide or polyester before melting or to the melt. The dispersion is made by dissolving the polyamide and the pigment in formic acid, pouring the solution into water, and drying and grinding the colored precipitate.

DYEING NYLON AND TERYLENE FIBERS. Ciba Ltd. BP 821 110 and 821 111, Sept. 30, 1959. Through BCIRA 39: 4411 (1959). (825)

Materials of the nylon and Terylene types may be died and printed with α-hydroxyanthraquinones having a single anthraquinone nucleus with at least one simple alkoxy or phenoxy group in β-position and 1-amino-2-nitroanthraquinones having a single anthraquinone nucleus and a simple acylamino group in α-position are claimed.

DYEING OF POLYACRYLONITRILE WITH WATER-SOLUBLE BASIC DIAZACYANINE DYES. H. Baumann, F. Arnemann, J. Eisele, and W. Federkiel (to Badische Anilin- & Soda-Fabrik AG). USP 2 913 303, Nov. 17, 1959. (826)

DYEING POLYETHYLENE TEREPHTHALATE WITH 1-AMINO-2-NITROANTHRAQUINONES. W. Jenny (to Ciba Ltd). USP 2 918 344, Dec. 22, 1959. (827)

CALCOGRAPHIC PRINTING COMPOSITION. L. Cicogna (to Star Stampa Tessuti Artistici SpA). USP 2 911 280, Nov. 3, 1959. (828)

For the printing of fabrics by transferring colored patterns from paper onto fabric by the use of heat and pressure.

IMPROVING THE WASHFASTNESS OF SUBSTANTIVE DYES. C. Taube and K. Böckmann (to Farbenfabriken Bayer AG). USP 2 912 296, Nov. 10, 1959. (829)

The dyeings are aftertreated with complex metal compounds of biguanides of polyalkylene imines.

TRANSFER PRINTING MACHINE. M. Levy (England). USP 2 914 875, Dec. 1, 1959. (830)

Decorative patterns are continuously imparted to fabrics from paper transfers by application of heat and pressure.

OIL-IN-WATER EMULSION PRINTING PASTE. A. F. Melchoni, J. L. Johnson, and V. L. Chase (to Interchemical Corp.). USP 2 917 475, Dec. 15, 1959. (831)

Methyl cellulose is used as the thickening agent.

BROWN PRINTS ON CELLULOSE WITH ACEDIANTHRONE. A. Caliezi (to Ciba Ltd). USP 2 918 345, Dec. 22, 1959. (832)

DYEING WOVEN GLASS FABRICS. C. L. Lawsberg (to Gen. Aniline & Film Corp.). USP 2 919 172, Dec. 29, 1959. (833)

Pretreatment of glass fabrics with an alkaline solution and a water soluble organic or inorganic salt permits the even application of a wide variety of dyes with a minimum of crocking.

DYED GLASS FABRICS WITH IMPROVED COLORFASTNESS. W. T. Roff, Jr. (to J. P. Stevens & Co.). USP 2 919 173, Dec. 29, 1959. (834)

The fabric is pretreated with an amide formed by reacting an aminoalkyltrialkoxysilane with an aromatic carboxylic acid and the resultant fiber dyed with a diazonium salt.

Mechanical processes D3

PRODUCING PATTERNED FLOCKED TEXTILES. Heberlein & Co. AG. BP 816 354, July 8, 1959. Through BCIRA 39: 3903 (1959). (835)

Fabrics coated with a fiber flock and a suitable adhesive are printed according to pattern with agents that cause the flock in the affected areas to coalesce into a film.

APPARATUS FOR DETECTING SKEWED OR BOWED WEFT IN A RUNNING FABRIC. J. D. Robertson and J. L. Broomfield. BP 816 491, July 15, 1959. Summary in BCIRA 39: 3901 (1959). (836)

ELECTRICALLY HEATED ROLL FOR CALENDERS. P. Hold (to Farrel-Birmingham Co.). USP 2 912 556, Nov. 10, 1959. (837)

TEASEL NAPPING MACHINE. J. M. D. Tomlinson (to Tomlinsons (Rochdale) Ltd). BP 820 383, Sept. 16, 1959. Through BCIRA 39: 4249 (1959). (838)

The teasels (natural or artificial) are attached in rows to the cylinder by means that permit adjusting their angle of inclination in each row. The mechanism comprises two sliding discs that operate sliding bars over the face of the cylinder, alternate bars being worked from opposite ends. Cam mechanism may be used to make the variation continuous.

CONTINUOUSLY OPERATING WEB WINDING MACHINES. Etablissements Gillet & Fils et Blanchisserie. BP 820 388, Sept. 16, 1959. Through BCIRA 39: 4250 (1959). (839)

In a machine for winding rolls of fabric of the kind in which 2 cylinders are used, the roll is transferred from the first to the second cylinder when partly filled, and the fabric is severed when the roll is complete. The invention seeks to make the process almost automatic by providing a magazine for empty rollers, and also offers a wide choice of diameter of the finished roll.

WIRE CARD NAPPING MACHINES. N. Pilkington (to Tomlinson's (Rochdale) Ltd). BP 821 850, Oct. 14, 1959. Through BCIRA 39: 4574 (1959). (840)

A raising machine employing card-wire covered rollers is fitted with a device for indicating the degree of napping effected and thus providing controls so as to achieve a predetermined raising result.

AUTOMATIC ALIGNING TRIMMING DEVICE FOR PILE FABRICS OF VARIOUS WIDTHS. S. F. Anderson and J. F. Gaskin (to Artloom Carpet Co.). USP 2 910 122, Oct. 27, 1959. (841)

SKEWER FOR FABRIC BOLTS. L. H. Harter. USP 2 910 176, Oct. 27, 1959. (842)

FABRIC ORNAMENTATION. C. S. Parker and A. Melville (to Bleachers Assoc. Ltd and Bradford Dyers' Assoc. Ltd). USP 2 919 484, Jan. 5, 1960. (843)

Ruffles, ribs, frills, and other effects are obtained by the application of compressive shrinkage to certain regions of the fabrics while adjacent regions are relaxed.

Drying, setting, conditioning D4

COMBINED CLIP AND PIN SELVAGE HOLDER FOR TENTER. K. S. Laurie (to J. Dalglish & Sons Ltd). BP 817 047, July 22, 1959. Through BCIRA 39: 4087 (1959). (844)

The pins are mounted on a rocker pivoted to the clip body, and a tumbler device, also pivoted to the clip body, is used to swing the rocker between the operative position and an inoperative position in which the pin holder does not obstruct the passage of steam or hot air to the traveling fabric.

THERMAL MODIFICATION OF ACRYLONITRILE YARNS IN PACKAGE FORM TO IMPROVE HEAT STABILITY. I. Barnett (to Johns-Manville Corp.). USP 2 913 802, Nov. 24, 1959. (845)